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ABSTRACT

Primary schooling in Africa is not the enemy of farming it has been thought to be, according to an analysis of relevant field research. Primary school leavers are pragmatic about farming. They frequently delay their farming efforts until their prospects look good. Many rural school leavers migrate to urban centers because of simple economics rather than because schools have turned them against rural living. School leavers tend to be over-optimistic and unrealistic about job and wage possibilities in urban centers. While it is true that wage rates are geared to academic qualifications, many educated rural-urban migrants experience long periods of unemployment before they obtain work. Once school leavers do find jobs, their migration pays their rural communities substantial dividends in the form of financial returns, idea exchanges, and increased skills upon their return. Whether or not school leavers are willing or able to function as rural non-farmers remains an unanswered question. The school leaver basically seeks a good life however he can find it. School plays an important role in giving him the knowledge, skills, and inquisitiveness to help him in his search. Recommendations regarding the financing, focus, and perspective of African primary schools are included. (SB)

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IS THE SCHOOL THE ENEMY OF THE FARM?

The African Eperience*

by

John W. Hanson**

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1. INTRODUCTION

> The educational systems in different kinds of societies in the world have been and are very different in organization and in content. They are different because education, whether it be formal or informal, has a purpose. The purpose is to transmit from one generation to the next the accumulated wisdom and knowledge of the society, to prepare the young people for their future membership in the society and their active participation in its maintenance or development.
>
> -Julius Nyerere, 1967

> Looking out over the next thirty or forty years, we see a radical transformation of our national life, for which large numbers of our citizens will remain permanently unfitted, unless provided...with opportunities for training. Save in rare, exceptional instances, the minimum foundation for such training consists of the fundamental education in respect to literacy, numeracy, manual dexterity, and general knowledge of the world furnished by the primary school. Thus, to use an economic metaphor, a primary education is the minimum basic educational requirement for take-off into the modern sector of our national life. Those that lack such advantages are liable to remain for the rest of their days largely outside the range of modern ways of living, unable to benefit from training or to share greatly in the rewards of a developed economy and becoming in the end an impoverished residue of a bygone age.
>
> -The Ominde Report (Kenya), 1965

Probably no other issue has dominated the literature of education in Africa since the approach and achievement of independence as has the question of what role the primary school can and should play in promoting rural development. This is easily understood. Because the vast majority of the African population is rural and because the primary school is by far the most available institution of formal education, it would appear that primary education should contribute to the economic welfare of the rural population. But the fact that rural development has not proceeded at the pace anticipated at independence has led many to accuse the primary school of failing to perform its function. Some point to the ubiquitous "unemployed primary school leaver" who, with his parents, had expected school education to provide him with a secure living, as proof of the school's alleged failure. Others, far less sanguine about the power of schooling, regularly point to non-educational factors as accounting for the failure of rural development to proceed at the pace anticipated, thereby relieving the primary school of responsibility for this failure.

The resultant literature concerning primary education in rural areas is plentiful and primarily of two types. The first is prescriptive and suggests principles or programs that would change the primary school into an agency designed specifically to promote rural development. In such literature descriptions abound of experiences in other areas of the world with longer histories of attempts to improve rural life through education. The second type most often generalizes on the failures of past African efforts to make the primary school a "change agent" in the rural scene--most frequently, efforts that involved modifying the curriculum. There is, within these categories, no dearth of literature arguing for or against "ruralizing," reshaping, or de-emphasizing the primary school.

This monograph is not intended primarily to add to either of these bodies of literature, although in the conclusion a position is taken in respect to the issues raised. It focuses, instead, on the results from field research which touch upon education, regardless of the position their evidence would support. In identifying factors affecting rural change or stagnation, scholars in the field have found it difficult to disentangle satisfactorily the effects of the school from those of other institutions and circumstances which impinge simultaneously or sequentially upon the rural scene. C. Arnold Anderson (1961) has made this point clearly with respect to studies of education and society:

> One of the foremost tasks of comparative education is to identify what education contributes, after partialling out other factors, to various traits of societies. Before imputing to schools an effect upon economic productivity we must disentangle education from physical-capital investment or extra-school socialization. We find it difficult to estimate the income yield from different amounts of schooling since much of the income-education correlation reflects the association of both with parental status or native ability.

In reckoning with the influence of different types or levels of education upon rural development in Africa, the problem is compounded by the variety of environmental factors that come into play--the constraints of customs and traditions regarding age roles, the availability of capital or transportation in a given area, and the pressure of population on land, to name but a few. To discover what roles schools can or do play in the process of rural change in varying circumstances will take time; but yet little caution has been obvious in the contentious writing that surfeits the field. It is the purpose of this monograph to indicate how uniform or how diverse the effects of primary education on rural development appear to be in sub-Saharan Africa, thus clearing the way for more sober analysis and reconsideration of the problem.

The difficulties involved in achieving this purpose are further increased by the ambiguity or lack of precision that exists in many of the studies concerning the consequences of formal schooling. The expression "the unemployed primary school leaver" illustrates well such imprecision. On the one hand, it designates both youngsters who have completed a stage of formal education and those who have dropped out along the way; on the other hand, it designates roughly a variety of occupational statuses including (1) those who are not employed at all, (b) those who are doing work that could be done as productively by those without the same level of schooling, and (c) those who are employed less productively than was formerly the case with people of the same educational level. In any discussion of unemployed school leavers or their plight, it must be remembered that differences between categories exist and are often overlooked, both in specific studies and in hasty generalizations about youth. In particular, it is important to recognize that distinctions should be made between youngsters who have dropped out before attaining permanent literacy and numeracy and those who dropped out after this point. Unfortunately, reports of field research often overlook one or both of these distinctions.

Rather than adding to the contentious writing that has appeared, this monograph has a much simpler central purpose--to lay out such findings about the impact of the primary school (and less frequently the secondary school) on the rural scene as these have been reported in field studies conducted in sub-Saharan Africa. The focus is the primary school, for it is the primary school that touches by far the greatest number of rural school children in Africa. There are reasons one might advance to sidestep this task, of course. The primary school in Africa today--except for the school garden--is most often separate from the agricultural life that surrounds it; its clients are not the present decision makers or producers of the surrounding community; and it teaches general knowledge and skills of reading, writing, and numeracy which are useful if the recipient is ultimately to become either a rural dweller or a rural-urban migrant. But the size of both government and private financing and effort that go into this institution, its established position in the educational and social structure of African countries, and the wide clientele it serves not only have caused deep concern about its nature but promise to continue to do so.

The nature of this monograph is simple. Despite the abundance of writing on the primary school and rural development, little has appeared concerning what field studies have actually revealed. Frequently, what has appeared concerning effects of education has been buried in studies of other social problems. This monograph thus attempts to confront the question, "Is the school the enemy of the farm?" on the basis of the scant research findings encountered in a wide search of the quite varied literature. Specifically, it addresses itself to three questions: (1) Does the primary school turn children irrevocably away from the farm and the village, creating in them unrealizable expectations that they feel can only be met in the city? (2) Does the primary school set in motion a rural-urban exodus that serves to denude the countryside of workers, leaving it more impoverished than before? (3) Does the primary school turn out youth who, if they remain in the rural area, are no more innovative and productive than their unschooled agemates? The paucity of the available field literature and the variety of answers given to these questions make uncertain even the empirical foundations for sound educational strategies that firm answers would provide; but one must start somewhere. As a contribution, this monograph is not intended to provide any new panacea for effecting rural transformation through education; it is rather intended to provide a somewhat sounder basis upon which to build new and more effective educational structures. It does this by assembling what has been found in field research in a number of disparate locations and situations in Africa. Only in the concluding chapter are three proposals for improved rural education advanced for scrutiny and criticism. In short, its central focus is reportive and analytic, not prescriptive.

2. EDUCATION, ATTITUDES, AND ASPIRATIONS

> I paid my own school fees because my father was dead, and I got money by selling two cows from sister's dairy. When the money was finished, I started to cultivate and was growing cotton for sale, and foodstuffs, and I sold a very little beans, maize, groundnuts, and sim sim. I was getting some money from cultivating but I am like a person who, when he has a bicycle, wants to get a motor scooter.
>
> -Gwere school leaver in town, quoted by Caroline Hutton (1973)

Among the most frequent assaults on primary education in Africa is the assertion that schooling turns children away from farming, the land, and any occupation associated with "dirty hands." This assertion is so ubiquitous in the literature that one would expect to find near unanimous support for it in the results of field studies of African students and school leavers. Yet such is not the case. That the school has turned youngsters, especially those in primary school, irrevocably and consistently away from the soil appears more the result of casual observation and hasty generalization than of careful study. To be sure, one of the earliest studies (Elkan, 1960) did find school leavers in three rural districts in Uganda unhappy with "doing nothing" at home, but this dissatisfaction with "doing nothing" is far different from dissatisfaction with the land.

Neither the source of the school leaver's attraction for the city nor the depth of his presumed rejection of rural life appears consistently in field studies that are reported in the literature on occupational attitudes. Moreover, the frequency with which school leavers reject farming appears to vary widely from situation to situation. Most often, broad generalizations about the insidious role of the school arise from observing one of the city's most conspicuous landmarks, "the unemployed school leaver." Why the school leaver is noticed, rather than one of his uneducated countrymen, can be left to conjecture. Our concern here is the extent to which research proves that a school leaver has indeed imbibed or developed values which make rural life no longer acceptable to him.

Many of those who blame the school for alienating African youth from the land will acknowledge that other factors support youths' negative attitudes toward agriculture. In most African countries rural life is characterized by poverty, scarcity of arable land (or land tenure systems which preclude the optimal use of that land), and lack of the capital and transportation networks required to transform traditional agriculture into profitable farming. Others recognize that students' attitudes have been influenced by the attitudes and judgments of their parents--judgments reflected in their decision to invest in the education of their children. The reasons underlying these judgments are documented in research literature that spans the continent. In the rural areas of the Lower Volta in Ghana, for example, Lawson (1972) found parents looked upon education of their children as the way to secure their own futures, especially through remittances:

> A form of security sought is investment in education of the young on the anticipation that the educated child will earn a higher income and thus be able to assist his parents and family more readily later on...investment in education was far more likely to yield a good return than investment in agriculture.

Across the continent in Kenya, Gwyer (1972) was simultaneously reporting:

> In Kakemega the children are advised by their parents that their only source of livelihood is the education they are being equipped with since there is no more land to be inherited. In Meru, parents are reputed to say to their children, "We have tilled this soil ever since time immemorial; we are as poor as ever. If you want to live as poor as we do, then stay with us and enjoy our poverty."

Only when parents have recognized the inability of commercial, industrial, and governmental sectors to absorb educated youth have they revised, in some countries, their estimate of the instrumental value of schooling. Their revision has been reflected in the declining number of parents willing to pay school fees and costs.

It is only within this broader environment of circumstances and influences that teachers, curricula, and institutional characteristics of schools can influence the attitudes and preferences of their students. Yet because the school is a socially controlled instrument for effecting cognitive and attitudinal change, it remains crucial in establishing policy to determine if students are in fact leaving the schools with attitudes that offer little hope for the enrichment of the rural areas where the ravages of poverty and the challenge of development are greatest. Although field studies of student and school leaver attitudes provide somewhat divergent results in East and West Africa, and although attitudes and aspirations can be expected to change as limits on available wage and salaried employment change, there is increasing reason to doubt that popular conceptions about such attitudes are fully accurate.

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Occupational Attitudes and Choices of West African Students and School Leavers

Field research on occupational attitudes and choices in West Africa has generally been more supportive than evidence from East Africa in indicating that school leavers look with little favor on farming or rural occupations. Studies in Nigeria, however, offer conflicting results--results which suggest that findings may often reflect longstanding ethnic traditions. In an extensive study in Western Nigeria, where the Yoruba have had a long tradition of relatively high urbanization, an I.L.O. team (Calcott, 1967; Mueller and Zevering, 1969) conducted an extensive study in Ifo, Otta, and Ilaro. Their results in this environment confirmed the generalizations frequently made about aspirations and attitudes of primary school leavers. Only 1.3 percent of the village children wanted to become farmers, while most of the students aspired to white collar occupations (47 percent of those residing in villages, 66 percent of those residing in rural towns, and 82 percent of those residing in cities). These figures were striking because some 80 percent of those interviewed came from families that had farmland. While their attitudes and aspirations may have been influenced by their difficulties in getting land allocated to them, two-thirds of the school leavers indicated that even if they could obtain land, they would not farm "because of their education." The evidence also indicated that it was the better-educated youth who were migrating to urban centers.

Quite different results were obtained by McQueen (1965, 1969), however, who interviewed 876 employed and unemployed primary school leavers in Eastern Nigeria in 1962. Here the tradition of urbanization has been shorter-lived. When asked which occupations they would "like very much," respondents indicated that "modern farming"[1] was far from an unattractive option and ranked it only slightly lower than "factory worker" (and other more unrealistic occupations given their level of education). Not only did over two-thirds of the primary school leavers indicate "modern farmer" as a desirable occupation, but they rated it higher than such clean hands occupations as primary teacher or clerk. At the same time, interestingly, less than one-quarter of the students and school leavers indicated "traditional farmer" as a desirable occupation. (These respondents were apparently in an unusually good position to distinguish between "modern" and "traditional" farmers, since some 60 percent of the employed school leavers were working on farm settlements and recognized the distinction between the two modes of farming.) Assessing the survey results, McQueen concluded:

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[1] "Modern farming" is an imprecise expression but appears to mean more profitable farming, which presumes the availability of enough land, the capital necessary to acquire needed technical inputs, and the knowledge and available labor required to realize a reasonable profit.

> It is noteworthy that these school leavers are not opposed to farming *per se*. The determining factor in their attitude toward farming is whether it is in the traditional or modern mode....These young men may be enticed back to the land if the conditions of work and income are favorable.

Equally interesting, however, are the results he acquired when he distinguished between "preferred" and "adjusted" (or realistic) choices (see Table 1). Interpreting the differentiation between "preferred" and "adjusted" educational aspirations, McQueen (1969) commented:

TABLE 1 -- PREFERRED AND ADJUSTED (REALISTIC) OCCUPATIONAL ASPIRATIONS OF PRIMARY SCHOOL LEAVERS (BY PERCENTAGE)

Occupational Categories	Primary	
	Preferred[a]	Adjusted[b]
	(N = 545)	(N = 545)
Professional	9.5	0.0
White Collar: Managers, Officials, Clerks, Politicians, Teachers	25.3	14.3
Technical, Skilled	43.3	29.4
Farmer, Trader, Unskilled Laborer, Service	20.7	40.2
No Choice, Don't Know	1.1	16.1
	99.9	100.0

[a] Q. 22 -- What would you like most to be in life?
[b] Q. 26 -- If you are not able to become a..., what will you do?

Source: McQueen (1965).

> One interpretation of these findings is that the occupational choices that these young people make are significantly influenced by what they think their educational attainments and related opportunities make possible for them....This interpretation suggests a pragmatic and somewhat flexible approach to careers, a conclusion that is reinforced by their readiness to change to different occupational choices under hypothetically adverse conditions....These results clearly indicate that school-leaver problems are not determined in any significant way by extreme aspirations of school leavers, except insofar as they resolutely strive for modern status.

The somewhat inconsistent findings in Nigeria are fortunately supplemented by a number of studies in Ghana, where empirical findings, some of which are not readily available, have been compiled and analyzed in some detail by Peil (1973). Three of these studies had concentrated specifically on middle school (grade 7 to 10) students and school leavers. First, in twenty middle schools a stratified random sample of grade 10 boys were asked what job they wanted and then traced six months later to see what success they had in acquiring work. Second, a group of school leavers from eleven middle schools in southwestern Ghana were asked what work they had found and to rate a number of occupations according to desirability. Third, a survey was taken to obtain the employment history and post-middle school education of those who had left a random sample of 200 middle schools throughout the country in 1964 and 1965. These were supplemented by two studies intended to provide comparative perspective by determining vocational aspirations of middle school students. The first surveyed the employment and additional education of students from nine secondary school graduating classes between 1965 and 1969. The second interviewed nearly 1,500 workers with various levels of education in sixteen randomly selected factories. The evidence gathered permitted comparisons of the occupations and vocational aspirations of those with less than grade 10 education, those who had completed grade 10, and those who had acquired secondary (grade 14) education. The results (see Table 2) provide an overview of both the relationship between education and aspirations and the change in those aspirations when the individual is faced with the realities of the job market.

As this table reveals, Peil generally found that a preference for farming and for semi-skilled or unskilled manual work declined with the level of education, while clerical, commercial, and professional occupations gained in attractiveness. Moreover, in studying those who had completed grade 10, Peil found that farming was one of the least desired occupations. Only 11 percent of the respondents reported they would very much like to be a farmer, while almost 70 percent indicated they would not like to be one. Interestingly, these statements of

TABLE 2 -- OCCUPATIONAL ASPIRATIONS BY LEVEL OF EDUCATION AND EXPERIENCE (PERCENTAGES)

Education	Farmer	Semi- and Unskilled[a]	Skilled	Clerical	Professional Teaching	Commerce	Total	N[b]
In School[c]	7	40		6	45	2	100	665
Just Left[d]	4	4	12	35	39	6	100	177
Working[e]								
No School	28	29	37	0	0	6	100	327
Primary, Muslim	14	32	43	0	0	11	100	111
Middle	8	21	39	13	6	13	100	612
More Than Middle	9	5	30	27	13	16	100	127

[a] Includes army, police.

[b] "Don't knows" omitted.

[c] Middle Form IV Sample.

[d] Post-Leaving Sample. These left middle school 6 or 18 months previously. Answers apply to jobs being sought; those employed have been omitted.

[e] Factory Sample, divided by educational attainment. The question asked was: "What kind of job would you like to have after you leave here?"

Source: Peil (1973).

occupational choice correlated highly with the first work students actually secured after age fifteen. Nonetheless, as Peil (1972) has reported elsewhere, those already employed in factories and who presumably earned an assured wage still thought seriously about becoming farmers. A principal factor determining whether each worker valued farming as an occupation was the degree of opportunity he saw related to it. Where land, labor, and markets were available, farming increased in desirability; where land was scarce or there was a need to work on one's father's farm, the attractiveness of farming diminished. In short, aspirations of the educated, as well as the uneducated, bore a close relationship to the opportunities workers foresaw in agriculture. It might also be noted that Peil found many persons who had moved into apprenticeships or factory jobs after first holding clerical posts, which seemed once again to lay to rest the frequently resurrected myth that school leavers are unwilling to engage in "dirty hands" work.

Commenting on these findings, Peil (1973) noted that a majority of those with no education and many with only a few years of primary school remained in farming; many more with little or no education returned to farming a short time after taking up wage labor. Summarizing the school leaver's perception of farming, she concluded:

> Farming is an occupation which provides a beginning and an end to a working career; the majority of school leavers do not yet see it as an occupation to which they can devote their whole lives. They will go into farming when they can have their own land (either by purchase or inheritance; many return home in middle age to take over the family farm) on which to grow cash crops, and be their own boss. They do not see education as worthwhile if it leads only to working on their father's farm.

This conception of the place of farming in a lifetime of work may also go far to explain an otherwise apparent paradox Peil found in school leavers' attitudes toward farming: asked to judge which occupations they believed had high prestige, school leavers ranked farming among them; asked which occupations they wished to enter, only some 10 percent chose farming. Thus, farming was at one and the same time seen as prestigious and, for them, unattractive.

If farming is an occupation a person would desire when he can possess his own land and employ farm labor (a situation he usually does not achieve until he has a successful outside income or can retire), the apparent discrepancy between the results reported by McQueen in Nigeria and the results reported by Peil in Ghana may be partially explained. The results in Eastern Nigeria were heavily weighted by the large number in the sample who were already working on farm settlements.

The possibility that both land and the capital to acquire labor and other farm inputs are necessary to enhance the attractiveness of farming as an occupation may also help explain the ILO findings in Western Nigeria (Calcott, 1967; Mueller and Zevering, 1969). But much of the evidence from East Africa suggests that possession of land and available capital may often be contributory rather than requisite factors in making farming appear attractive to many rural school leavers.

Occupational Attitudes and Choices of East African Students and School Leavers

Concern for large numbers of unemployed school leavers is as great in East Africa as in West Africa. Again, much of the blame for the influx of school leavers into urban areas has been placed on the attitudes and expectations that the primary school allegedly creates in its students. As in West Africa, the allegation that primary school leavers are unwilling to accept farming as their occupation was carefully researched during the first decade of independence in Tanzania, Kenya, and Uganda. But here the studies have cast considerably greater doubt than those from Nigeria and Ghana on the role of schools in alienating students from farming.

One of the most thorough studies of the effects of primary education in a modern African society was conducted in the Mwanza District of Tanzania by an interdisciplinary team organized by the Centre for the Study of Education in Changing Societies. Of particular interest is the work of Heijnen (1967, 1968), which focused on the primary schools' effects on the vocational attitudes of primary school students and the behavior of former students. Conducted in an area where only 15 percent of primary school leavers could be accommodated in post-primary institutions, the study concentrated on Standard VIII students and school leavers in Mwanza town and in the rural area. The vocational aspirations of those in Standard VIII are relevant here.

In his attempt to discover the aspirations of these prospective school leavers, Heijnen found no evidence that school leavers were loathe to do "dirty hands" work or to engage in farming. In a sample of three rural schools, Standard VIII students listed "farmer" as choice number 8 among 24 occupations conceivably open to primary school leavers. (Even more impressive was the fact that "dirty hands" occupations were not disdained. "Garage mechanic" was the second most popular choice, standing well above such clerical or "clean hands" occupations as typist, choice 9, or office messenger, choice 18.) On the basis of the interviews, Heijnen (1961) concluded that:

> There is perhaps little enthusiasm for farming, but the great majority of the children are certainly not unwilling to farm....Their attitude towards farming turned out to be much less uncompromising and negative than might have been thought. Although they naturally would prefer a well-paid job, their sense of realism is sufficient to recognize that the alternative to peasant farming is unemployment and consequently the great majority decide to "dig their shamba." If the possibility of becoming a modern farmer were within their range of vision, perhaps the judgment on the desirability of farming might have proven even more popular.

The attitudes and aspirations which Heijnen found among primary school students and school leavers in Tanzania paralleled roughly the findings in several studies in neighboring Kenya. John Anderson (1968), in an important study, focused on the occupational attitudes of school pupils in two progressive areas in the Central Province. Here all pupils who completed the final grade in three primary schools were surveyed. While recognizing that testing young adolescents is difficult, Anderson attempted to ascertain both the aspirations and the expectations of the students. Overwhelmingly, the students indicated a desire to go on to secondary school; but when asked what occupation they would most like if further schooling were not possible, they listed "secondary" aspirations, which reflected, according to Anderson, a fairly realistic appraisal of the opportunities that were to some extent available (see Table 3).

TABLE 3 -- OCCUPATIONAL PREFERENCES OF RURAL PRIMARY SCHOOL STUDENTS IN KENYA

Boys		Girls	
55	Teacher	83	Nurse
44	Mechanic/Engineer	61	Teacher
30	Clerk/Typist/Bookkeeper	23	Clerk/Typist/Bookkeeper
24	Driver	4	Farmer
18	Farmer	3	Tailor
16	Policeman	0	All Others
13	Railways		
8	Army/Navy		
8	Electrician		
8	Agricultural/Veterinary Inspector		
6	Shopkeeper/Trader/Businessman		
22	All Others		

Source: Anderson (1968).

The pattern of responses to his questions on occupational *choice*, occupational *expectations*, and *factors involved in making choices* led to several generalizations. First, the great majority of students chose jobs that were available in the rural areas, which suggested to Anderson "that it is safe employment rather than the glamour of city life which is sought." Second, when asked what they expected to be doing a year later, 72.5 percent of the boys and 72 percent of the girls indicated that they expected to be farming or working at home. Third, although *heavy manual labor* was indicated as a factor to be avoided in choosing a job, the pattern of choices did not indicate rejection of all blue collar or "dirty hands" work. Fourth, those who indicated an interest in farming reflected not only an understanding of the returns modern farming could bring but also a recognition that they needed both land and further farming skills if they were to make cash-cropping a success. In assessing their responses to questions concerning agriculture, Anderson concluded:

> There is an ambivalent attitude: an underlying respect for land and farming skills lingers in many young people and can be aroused, but unless agriculture can demonstrate powers to provide more than a subsistence living it cannot compete with regular income jobs. In areas where families are large and land is over-committed or unavailable, it is a non-starter.

Brownstein (1969, 1972) supplements this study of Kenyan rural primary school *students* with one of Kenyan rural primary school *leavers* in four rural districts of Kenya (Embu, Kitui, Kericho, and Central Nyanza). Here he traced not only 830 students who sat the Kenya Preliminary Examinations (the primary school-leaving examination) in 1964, but also their parents. Many of the students had attended secondary school--a situation made possible by the rapid growth of harambee secondary schools. But of the remainder who had not done so, many more had remained in the rural areas than had migrated to the cities. Some 20 percent of the leavers were found to be at home unemployed, and the vocational aspirations of this group are of particular relevance in judging whether the school creates aspirations hostile to farming or other rural occupations.

Brownstein found that unemployed school leavers at home on the land or in the village did indeed express dissatisfaction with their present *jobless condition*. But this was not necessarily a dissatisfaction with farming or the land, but, as was the case in Anderson's study of school students, was rather a dissatisfaction with conditions that prevented them from working and achieving the things they felt they ought to achieve. As Heijnen found in Mwanza, Tanzania, moreover, the position of farmers did not fare badly when the unemployed primary school leavers in the rural areas were asked what job they would most like to have--in this instance ranking fourth (with 10 first choices) among the 22 occupations they named. Almost all of the occupations listed were quite realistic, given the students' level of education. Furthermore, when asked if they would refuse any of the occupations listed, none of the rural unemployed school leavers indicated that they would reject a job as a modern farmer and only three indicated that they would refuse a job as a jembe (traditional) farmer. At the same time, Brownstein found that only half the school leavers believed they possessed the education and experience to be a modern farmer. The combination of their general acceptance of "modern farmer" as a worthwhile occupation and their recognition that they needed education and experience to succeed as modern farmers implied to Brownstein an educational corollary:

> This suggests that a concerted program of rural development designed to teach boys how to develop their home areas would be well-received. Creation of such a program would not by itself resolve the problems of land ownership which the boys face, but it does mean that one of the major objections to such a program, namely that they would resist it, may well be fallacious.[2]

That the choices of school leavers, however, are regularly conditioned by factors which are quite beyond the control of the school is borne out by other research in Kenya. The option of becoming a modern farmer, for example, is an expensive one, and often not one which appears feasible in the near future to the school leaver. The situation is well stated by J. Moock (1973). In her study of Maragoli, Western Province, she found that outside employment was in fact a prerequisite to modern farming:

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[2] Generalizations to the effect that parents (who ultimately make decisions on sending children to school) will universally reject school programs with a rural development bias may likewise be fallacious. Although the attitudes reported by Lawson (1972) and Gwyer (1972) cited earlier (cf. p. 6) undoubtedly pertain in some areas, other research indicates they are not universal. Marvin (1975), for example, found that among adults in Busoga in Eastern Uganda, 71 percent found education to be good for other than reasons of employment. Concluding, he remarked: "Certainly the Busoga in Uganda regard education as providing a broader foundation for adult life, and not simply the certificates necessary for the highest paying jobs. If a child wants to work in the city, and is able to find a formal salaried position, a father will be pleased. On the other hand, if a school leaver should turn to agriculture or the informal urban sector to earn his living, the father is not necessarily 'disillusioned', nor does he feel he has wasted his money."

> Cash-crop or dairy farming requires an initial financial investment of substantial size. Usually the farmer must purchase land to add to his inherited plot before he can have the minimal acreage required for any cash enterprise. Land in Maragoli, because of its social security value, usually sells at over shs. 4,000 an acre, and a plot on a settlement scheme is difficult to acquire. But even if the farmer overcomes his land constraint, he still needs money for such agricultural inputs as seed, fertilizer, equipment, labor, or animals. Therefore, most progressive farmers in Maragoli are persons who have returned from several years of wage employment outside, or who have non-farming occupations within the home area.

The choice of a non-farm occupation, therefore, may be either a pragmatic realization that modern farming is beyond the immediate reach of the school leaver, or is a type of "proxy vote" for farming as an occupation farther in the future.

The Brownstein, Anderson, and Moock studies in particular raise the question of what attitudes might prevail if land were available to new school leavers--perhaps in farm settlements. Hutton's (1973) study of unemployed school leavers who had settled and were working in the Nyakashaka Farm Settlement in Uganda answers this question. In her study, the school leavers were asked, "If you had a friend leaving school now, what would you advise him to do?" The settlers were also asked to include the reasons they had for the advice they would give. Their responses to these two questions are revealed in Tables 4 and 5.

TABLE 4 -- ADVICE YOU WOULD GIVE A SCHOOL LEAVER

	Numbers
He should come to Nyakashaka Farm Settlement	21
He should become a farmer anywhere	11
He should come to Nyakashaka if he fails to find work	7
He should search very hard for a job	1
TOTAL	40

Source: Hutton (1973).

TABLE 5 -- REASONS FOR ADVISING FARMING

	Numbers
It gives you money and food and a good future	33
It gives you permanence and security	6
Uganda's economy depends upon it	3
It pays better than a government job	1
He would have no alternative	3
TOTAL	46

Source: Hutton (1973).

Quite by contrast to the responses of the Nyakashaka settlers, underemployed and unemployed school leavers surveyed in Kampala (and who could not be assumed to have the requisites for successful farming) seldom looked upon farming as a reasonable option. To document their attitudes, Hutton asked respondents to complete two stories: the first told of a youngster who has just learned he must terminate school because of lack of fees; the second depicted an unemployed school leaver who had not been successful in finding work in town. Whereas 67 percent of the respondents from Ankole (primarily from the Nyakashaka Farm Settlement) completed these stories by having the youngster become a farmer, only 21 percent of the unemployed youngsters or "applicants" in Kampala did so. Although Hutton judged the positive attitude toward farming of the Nyakashaka youngsters to be, in part, a justification of their own position, it seems to clearly reflect a far more favorable attitude toward farming than is generally presumed--an attitude which seldom exists in those who lack land and opportunity.

Yet it is not the external constraints on farming but the internal program of the school that has been of greatest interest to educators. Unfortunately, research studies have paid scant attention to variations in school programs. Of interest, then, is a study conducted by Davies (1968) in Buganda to determine the feasibility of a contemplated Unesco pilot project. That portion of his study which touched upon student attitudes toward farming offers findings which generally parallel those of Heijnen and Anderson. Data revealed that farming is an acceptable, if not the preferred, way of earning a living among rural primary school students in Buganda. These results stand out in Table 6.

TABLE 6 -- ACCEPTABILITY OF FARMING AS AN OCCUPATION AMONG BUGANDA PUPILS

	Farming as First Choice	Farming as Acceptable Alternative	Total
Boys	19.1%	45.8%	64.9%
Girls	5.3%	44.2%	49.5%
TOTAL	13.5%	14.8%	58.4%

Source: Davies (1968).

This study is unique among the studies surveyed in that it attempted to further determine which features of the school accounted for the acceptance or lack of acceptance of farming as a career objective. By dividing his sample of schools into those which had successful school gardens (and teachers who were generally enthusiastic about their gardening program) and those which did not, Davies found that students attending the former held a more favorable attitude toward agriculture. But much more needs to be understood about school gardens and their use before rushing to conclusions about their efficacy in shaping students' vocational attitudes and aspirations.

The studies summarized thus far have concerned the attitudes of school children and school leavers towards farms and farming. But it is increasingly recognized that the rural scene is also peopled by many in rural occupations that service the farm population itself. If the school is guilty of creating an anti-rural bias in school leavers, it presumably affects attitudes toward these related occupations as well. Weeks (1972), in a pioneer study, examined the education and attitudes of those working in such occupations as driving, small-time trading, and construction in rural Buganda. He found in his sample that only 8 percent of those in rural occupations other than farming had not attended school. Moreover, he found that those who had attended primary school were anything but disenchanted with rural life. Not only were they happy with their position and prospects where they were, but 42 percent of them had never looked for a job outside the area, even though salaried employment was available elsewhere.[3] In assessing the evidence, Weeks concluded that "the frustrated and alienated youth do exist, but they can be counted on the fingers of one hand. We do not portray Buganda if we look only at them."

Studies of school leavers who have migrated to cities in search of work further support the proposition that rural primary school leavers have not been alienated from the rural area. In one of the most encompassing of these studies, Hutton (1973) studied unemployed immigrants in the major cities of Kampala and Jinja. She categorized into three groups the attitudes of the school leavers, who comprised about one-third of the rural-urban immigrants in her sample of the unemployed. The first consisted of school leavers with an essentially rural orientation--youngsters who had not necessarily cultivated land, but who had decided to look for work temporarily because they had not been allotted land, had no cash crops, or had been unable to cultivate on their own account. Surprisingly, this group constituted nearly two-thirds of the school-leaver rural-urban migrants. The second group consisted of a small number of migrants who expressed strong antipathy toward agriculture and appeared to have firmly turned their backs on farming as a way of life. The third group consisted of a still smaller number of migrants who had deliberately chosen the urban way of life. They regarded jobs in the urban area as promising more of the "good life" than they could acquire on the farm.[4] The latter two groups, which constitute only one-third of the school-leaver migrants, clearly become the obverse and reverse sides of the stereotype of the school-leaver migrant. It is important to note, however, that in total numbers, those who either completely rejected agriculture and those who were lured by the attractions of city life were only half the number of those who would return to the farm if land and opportunity were available to them.

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[3] Weeks found, however, that the impact of secondary school upon attitudes and expectations was quite different from the impact of primary school. Unlike those with no education or only primary school education, all those who had some secondary education had looked for a salaried position.

[4] Interestingly, Hutton (1973) found that the settlers classified "the good life" as one composed of:

- high income
- satisfaction with one's chosen occupation
- being wealthy with money in the bank
- owning a scooter, motorcycle, or car
- having a high standard of living
- being married and able to support one's family in comfort
- having educated children
- having a good house
- being an important man, listened to, respected, widely known, and addressed as "Mr."

The research on students in primary schools, school leavers remaining in rural areas, and school-leaver migrants to the city indicate that in East Africa at least, the primary school is not producing youngsters who are irrevocably alienated from farming or rural life.

The Impact of Secondary Education

Although this analysis of research focuses upon the primary school's effect on the farm and rural area, this effect is in part exercised through its close relation to the secondary school. One of the functions of the primary school is to prepare youngsters for secondary education, and in performing this function it inevitably plays an important part in determining who shall go to such schools. If the secondary school consistently alienates youngsters from the rural area or prepares them for urban occupations, the primary school is indirectly contributing to this rural loss. Furthermore, if the primary school has set in motion the growth of attitudes antagonistic to farming and rural life, one might expect to see these amplified in the secondary school. Thus the vocational attitudes and aspirations of secondary school students shed indirect light on what the primary school has already set in motion.

As students move up the education ladder, one would expect that their aspirations and expectations would rise correspondingly. This is true to some extent, but it is not clear that post-primary students possess or develop a set of values hostile to the farm or rural area. The studies presented thus far that survey attitudes and aspirations of secondary students--such as those of Peil (1973) and Weeks (1972)--have generally suggested that it is non-rural jobs and settings that youth with secondary education seek. From studies in Ghana, for example, Peil (1973) reported that professional and commercial occupations became more popular and agricultural occupations less popular among youth with higher levels of education; Mueller and Zevering (1969) similarly found in Nigeria that those with secondary education migrated to the cities; and in East Africa, Weeks (1972) found in his study that youth who had attended secondary school sought salaried employment--presumably more available in urban areas. It does not follow from this, however, that if higher economic returns from rural occupations were available, those with secondary education would still reject such occupations.

Furthermore, in studies that focused specifically on secondary school students' aspirations and expectations, there was no proof that secondary school students rejected agriculture as a preferred sector of employment. Four studies of the job aspirations of secondary school students in Ghana, Ivory Coast, Nigeria, and Kenya indicate that such is not the case.

In one of the best-known secondary school studies, Foster (1965) studied the vocational attitudes and aspirations of secondary school students in Ghana. While "farming and fishing" were least frequently chosen occupational categories, occupational aspirations in the related fields of biology and agricultural sciences attracted 9 percent of the boys and ranked behind only medicine, physical sciences, and secondary teaching in popularity. Furthermore, even if secondary school students rejected farming for themselves, they did not rank it at the bottom of the prestige structure, but rather placed it above middle school teachers and some skilled artisans in prestige. As Foster comments, "In light of the jeremiads concerning the contempt for agriculture among secondary school pupils, it is refreshing to find how highly they esteem the status of the farmer." In neighboring Ivory Coast, Clignet and Foster (1966) similarly found that 14 percent of the secondary school boys aspired to occupations in agriculture, a category which included agricultural engineers, technicians, and demonstrators, albeit not farmers themselves. In both countries the researchers also found that students recognized that their secondary schooling was in effect drawing them toward white collar jobs. Few anticipated that they would end up in agriculture and recognized that if they did, it was because they planned to pursue higher education in an agriculture-related field. But here again it seems reasonable to assume that choice of occupation results more from reward and income structure in the country than from any school-fostered disinclination toward agriculture or related pursuits.

Akinkunle (1977) found a similar picture of aspirations and career choices in a study of fifth (final) year students in ten Federal Secondary Schools in Nigeria. He divided careers into (a) agricultural and related occupations, (b) construction and related occupations, (c) health and related occupations, and (d) all others. He found that 8.9 percent of all students surveyed aspired to occupations related to agriculture. This figure corresponded closely to the percentage of students who had aspired to agriculture as a career before entering secondary school; it was also a figure which considerably exceeded the projected needs for middle- and high-level manpower in agriculture as laid down in Nigeria's Third Development Plan. That secondary education was not shifting the preference of rural people away from agriculture was further indicated by the fact that 40.5 percent of those from rural areas indicated a preference for agricultural occupations.

The relatively high esteem for agricultural occupations revealed in the Foster and Akinkunle studies was found by Maxwell in East Africa as well. Maxwell (1969) studied the occupational preferences of 1,855 Form II and Form IV secondary students from eighteen secondary schools in Kenya. Using an open-ended questionnaire, he found the order of occupational choices and attitudes to be those shown in Tables 7 and 8.

This pattern of preferences and tolerances scarcely indicates a rejection of the rural scene. In summarizing his data, Maxwell commented that "of the eighteen jobs which 50 percent or more of the students were inclined to accept, eight were directly involved in agricultural development and another four were closely related to it..." Assessing the extent to which students' first choices were realistic in terms of opportunities available, he further concluded that the percentage of secondary students inclined toward agriculture or agricultural training indicated students were making a fairly realistic assessment of opportunities for employment in Kenya.

TABLE 7 -- SECONDARY SCHOOL STUDENTS' FIRST CHOICES OF OCCUPATION IN KENYA

Job Description	Number	Percentage
Agricultural Officer	231	12.5
General Field of Agriculture	214	11.5
General Field of Engineering	174	9.4
Medical Doctor	127	6.8
Teaching (General)	125	6.7
Farming	94	5.1
Lawyer	58	3.1
Accountancy	57	3.1
Agricultural Department (General)	45	2.4
Farm Management	43	2.3
Agricultural Instructor	40	2.2
Veterinarian or Veterinarian Officer	30	1.6
Agricultural Training (General)	30	1.6

Source: Maxwell (1969).

TABLE 8 -- SECONDARY SCHOOL STUDENTS' INCLINATION TO ACCEPT A JOB (5 POINT SCALE)

Occupation	Mean Score	Percentage Inclined to Accept
1. Agricultural Officer	4.4	89.7
2. Modern Farmer	4.2	83.0
3. Agricultural Assistant	4.1	81.9
4. Large-Scale Farm Manager	3.9	75.7
5. Veterinary Officer	4.0	75.0
6. Research Scientist	3.9	70.4
....		
9. Engineer	3.8	67.8
10. Medical Doctor	3.7	62.0

Source: Maxwell (1969).

If these four studies accurately depict secondary school students' aspirations, the secondary school must also be judged "not guilty" of turning the aspirations and concerns of its students away from the rural areas.

The fifth study, a study of Kenyan secondary school leavers finishing Form IV between 1965 and 1969 and traced early in the 1970s, has been reported by Kinyanjui (1974). This study, albeit in the somewhat unique environment of Kenya with the economic attractions of Nairobi ever present, raises doubts that the attitudes of secondary school leavers are as malleable or open to the idea of returning to rural life as the previous studies have suggested. Noting that few secondary school leavers willingly return to agricultural jobs in rural areas, Kinyanjui found that (1) as the early years of independence passed, secondary leavers found ever fewer opportunities to return to bureaucratic jobs in the rural area ("These jobs are in essence urban jobs in a rural context, and they are created as a result of the penetration of urban enterprises into the rural periphery."); (2) the poor wages and working conditions which prevail in farming enterprises made such occupations unattractive to secondary school leavers; and (3) most of those who willingly took up agricultural work did so only on a piecework (kibarua) basis only in order to subsist, adjusting as best they could through seasonal labor while they continued to search for better (urban) opportunities. Their dreams of urban employment die hard. "Hopes for formal employment are still entertained... even when the school leavers have begun earning a living in the rural sector and the situation in the formal sector is not promising."

The crucial factor, which Kinyanjui noted and to which we shall again refer later, is that there is little the school system can do to impart values and aspirations which are contrary to those the wider society is encouraging. Stating a point we shall return to again and again in this monograph, Kinyanjui stresses that the crucial factor in the decision of the 30 secondary school leavers who were traced back to the land was not hard to find:

> (An) important characteristic of the school leavers who go back to the land is that these leavers have resources to go back to. Out of the thirty 1969 school leavers who went into self-employment, only two came from landless homes, but even these two had some resources to fall back on. The other 28 came from homes where parents owned land ranging from two to thirty acres. This seems to be a crucial factor in making the decision to return to the land. An unemployed school leaver who has no resources such as land to return to in the rural area will most likely remain in the urban center despite the disappointment he encounters.

Accounting for the departure of the secondary school leaver from the land, Kinyanjui places the blame for migration and unemployment in the present economic structure not on the school system but outside the school system. Given this situation, he cautions:

> To give our school system the task of imparting values and aspirations which are contrary to the wider society is to ask the teachers and the school system to accomplish the impossible.

It is with due regard to this admonition that we shall turn at the end of this monograph to suggest what modest and reasonable things the school can and should do in respect to the environment of economic facts and individual dreams which surrounds it. These are obviously not things that will single-handedly solve, or even contribute in a major way to solving, the economic problems of Africa.

Education and Aspirations: The State of Our Knowledge and Implications for the Schools

If the school is indeed the enemy of the farm, the field studies available do not offer proof that it plays this role. Rather, the studies appear to indicate that students, assessing farming as an occupational choice, take into account many relevant factors and are influenced by many realistic conditions limiting the potentialities of farming for the young school leaver. In part, of course, students' aspirations and consequent behavior are conditioned by the expectations of those who have invested heavily in their education--the primary expectation being that future economic returns from wage employment will contribute to the security of families and provide students themselves with the basis for a good life. In large part, students are appraising realistically the likelihood of making a profitable living through farming. When land, relevant knowledge, labor, and markets are sufficient for profitable enterprise, most students look with favor on agriculture; when these are lacking, students frequently do not reject agriculture out of hand, but rather seek to postpone the prospect of farming until a later point in their life when they anticipate that the opportunity for successful independent farming will be greater. In doing so, they frequently overestimate the capacity of urban centers to provide them with the jobs that will enable them to accumulate the capital needed for profitable--not just subsistence--farming. In short, they are pragmatic and often surprisingly realistic about their present prospects in farming; when they are unrealistic, as many of them are, it is in thinking they will find in urban centers the jobs that will provide them either a good living or the capital to return in time to profitable farming.

It is unlikely that the schools can by themselves effect any major transformation in the attitudes and subsequent occupational behavior of students. Where external conditions for profitable farming or rural occupations are available or can be made available, schools can use and increase interest in these occupations by giving more attention to, and using more effectively, the rural environment throughout the school curriculum. Also required would be greater localization of school programs that have too often been regionally or nationally standardized. But if such changes are not incorporated in wider programs of rural regeneration and support, they will be only minimally more effective than present programs in affecting students' attitudes.

Yet school programs are designed to serve not only the local community but the wider society. While the school should aim at preparing youngsters to live productively in the rural environment, it should also acquaint them with their national environment. By acquainting students with a wider range of opportunities outside of farming, the school is simply performing one of its legitimate roles in helping students shape their lives. But to perform this role adequately, the school must also help students recognize advantages inherent in modern farming. By providing knowledge of urban life and by casting rural occupations in an unfavorable light, the school has allegedly rendered a great disservice to the farm; but the support for this assumption is not forthcoming.

3. EDUCATION AND RURAL-URBAN MIGRATION

> My father has only a small plot on the island (in Lake Victoria) just sufficient for his food crops and a small shamba of tobacco for sale. I myself have no land at all and no work is available there. So I really had no choice....Maybe I can take over the land of my father when he dies, but until then I shall have to stay in town for my living.
>
> -Interview with Sukuma boy, quoted by Heijnen (1968)

The conviction that school leavers are not opposed to farming and remaining in the village, and that the school is to blame appears to arise chiefly from the presence in cities of numerous school leavers who have found no work. The ubiquitous mention of the "unemployed school leaver" in the literature on education appears to reflect a widespread conviction that schools produce aspirations that exclude farming and other rural occupations. If, as Chapter I indicated, the aspirations and attitudes of those with primary school education are not as uniformly hostile to the rural areas as is often maintained, education may nevertheless play a role in determining who migrates. In a comprehensive review of the literature worldwide, in fact, Shaw (1975) recently summarized that:

> Over the last decade, the findings of a considerable number of studies add support to the proposition that while controlling for a wide variety of socioeconomic factors, migration is highly selective with respect to education.

Furthermore, he was led to conclude:

> It is likely that within the educational structure in the underdeveloped country, a small increment of educational attainment at a seemingly low level (e.g., from late primary to early secondary school) may have a considerable impact on the propensity to migrate, whereas in a developed country such an increment would have a negligible effect.

It is precisely with education at this relatively low level and in such less-developed countries that we are here concerned.

The association of education with the decision to migrate in Africa has been uniformly recognized. For example, Sabot (1972) comments on migration in Tanzania:

> People living in rural areas who have been to school are far more likely to migrate than people who have had no formal education whatsoever. The more education a person has had, the more likely it is that he will leave his home area, leave the familiar way of life of his parents and the majority of his tribe, leave a future that is directly tied to the land

> for provision of food and money, and make his way to town. There is nothing new about this phenomenon; it has been the same ever since the beginning of the twentieth century when educational opportunities first became available and desired by the people.

Caldwell (1968), writing from across the continent in Ghana and in one of the most thorough African studies of migration, concluded similarly:

> Possibly the most important matter to be considered is the role of education, especially formal school, in inducing rural-urban migration. The high proportion of school children planning to go to town is not merely a product of their youth; schooling itself turns people toward town life. Indeed, in Ghana, it is often thought of as preparing people for urban occupations.

If rural-urban migration "denudes the rural population which is normally responsible for agricultural production (and) may well be a critical factor in retarding economic growth in many less-developed countries" (Iyoha, 1975), increasing provision of primary schooling might indeed be held culpable for the laggard pace of rural development. School might, indeed, be "the enemy of the farm."

Before turning to a fuller examination of the evidence on the relationship of education to migration, therefore, we might briefly examine whether the migration of the young automatically denudes the rural areas of the labor force and diminishes their potential for development. There are several reasons to believe that it does not.

First, while the percentage of the population engaged in agriculture in Africa is declining, the absolute number of persons in rural areas is estimated to be growing by one or two percent per year. In the Ivory Coast, where rural migration of the population was explicitly studied, for example, Zachariah and Conde (1978) found that rural-urban migration only reduced the growth rate of the rural population from 5 percent to 4 percent in the decade from 1965 to 1975. Thus, in general, the population pressure on the land continues to increase. Similarly, growing population pressure on the land and the absolute number of people living in rural areas will likely increase in almost every African country during the next 10 to 20 years. Kenya's population, for example, is growing at 3.9 percent per year and as a result Kenya's population will double in 17 to 20 years; some of this growth will almost perforce be in rural areas.

Surplus labor may accrue in the rural area not only because of the high proportion of young in African populations, but because principles of land tenure and land devolution may deprive the educated youngster of the chance to gain a livelihood in the countryside. Migration, then, so often blamed on the education the young possess, may in fact arise from far different causes. The very youthfulness of the migrant population, a youthfulness which is associated with education because of the late and accelerating growth of the latter, may therefore be producing the disposition to migrate. Thus, to blame the school for causing rural-urban migration, one must first assume that arable land is in surplus in most African countries today--a proposition beyond the scope of this monograph, but one which appeared contrary to the situation pertaining in some of the studies reviewed (e.g., Mueller and Zevering, 1979; Hutton, 1973; Rempel, 1976). One must also assume that it is the school, rather than landlessness or some other factor, which leads youth to migrate.

In the second place, it must be recognized that migration is of several types. Much African migration is seasonal--workers migrate to areas where agricultural work is available or leave areas where their own services are not at the time required. These migrants in no sense denude the rural areas; in many cases, on the contrary, they maximize the use of the labor force available. In many cases they also bring back new crops, varieties, or techniques which they introduce in their own gardens or fields. Furthermore, most African migration is only temporary. In Sierra Leone, for example, Byerlee, Tommy, and Fatoo (1976) found that two-thirds of the rural-urban migrants had returned to the rural areas after five years; in Ghana, Caldwell (1969) found a similar percentage returning from the city. Finally, some rural-urban migration, as J. Moock (1978/9) has suggested, creates and is characterized by such a close bond between those regularly in the city and those regularly in the village that the distinction between urban dwellers and rural dwellers tends to break down. In these cases, it is difficult to see that the school, through its association with migrants, is in any way denuding or impoverishing the rural area.

In assessing whether or not the school is the enemy of the farm, even in the limited sense that it leads persons to migrate, two types of evidence must be examined: (a) evidence proving that schooling does in fact induce rural-urban migration and, even more importantly, (b) evidence demonstrating that losses to rural areas through migration clearly outweigh gains to such areas as a result of migration. It is in respect to the first assertion, namely that education leads to rural-urban migration, that most evidence has been amassed.

The Impact of Education on Rural-Urban Migration in West Africa

As indicated, one of the most thorough single-country studies which examined inter alia the impact of education upon migration from the village or farm to urban centers was carried out in Ghana by Caldwell (1968, 1969). In surveying 13,776 persons in 1,782 households in both rural and urban areas, Caldwell and his team focused on those members of rural households who had migrated to urban areas and those who had not. The impact of education on the flow from rural to urban areas is clearly revealed in Table 9. These data indicate that it was not mere contact with the school, but considerable contact with the school that made the difference in inducing the rural dweller to migrate. Caldwell attributed this finding to the fact that many of those who had only limited primary education were not literate, could not speak English, and knew little about the world outside their communities. (In this regard, it is interesting to note that UNESCO has often used four years of primary school as a measure in determining literacy rates.) Education was not a sine qua non for migration, however, for some unschooled persons had migrated while some with considerable schooling remained in the rural areas--frequently because they owned cocoa farms or were induced to do so by administrative or educational positions. Those with limited education who had migrated looked toward seasonal migration rather than long-term migration, but education appeared to play an important role in promoting the success of either type.

Knight (1972), using data from Caldwell and from his own survey of middle school leavers in Ghana, later concluded:

> The incidence of migration increases with the level of education. Farmers' children entering the labor force after leaving middle school are anxious to get jobs in the modern sector of the economy. The evidence, although inconclusive, suggests that education has this effect not so much by alienating its recipients from the land as by increasing the economic benefit from migration, improving both the probability of finding an urban job and the earnings from it if found.

This final supposition would appear to be supported continent-wide, albeit not altogether conclusively, by the data earlier presented in Chapter I.

The results obtained by Caldwell and Knight in their country-wide studies of Ghana were duplicated by Nabila (1974) in his study of a specific ethnic group, the Frafra of northern Ghana. Here, as in Ghana at large, education correlated positively with the decision to migrate to the urban area. In this instance, the most notable educational threshold for migration appeared to be completion of at

TABLE 9 -- MIGRATION PATTERN OF GHANA RURAL RESPONDENTS OVER TWENTY YEARS OF AGE

		Highest Level of Education Experienced			
Sex	Migration Classification	None	Limited Primary	Extended Primary & Middle School	Secondary School & University
Male	Never Migrated	69	66	47	25
	Rural-Urban Migrant	27	31	49	67
	Visiting, Other	4	3	4	8
	TOTAL	100	100	100	100
Female	Never Migrated	80	70	49	39
	Rural-Urban Migrant	16	28	46	61
	Visiting, Other	4	2	5	0
	TOTAL	100	100	100	100

Source: Caldwell (1969).

least middle school education (grade 10). Dividing his population into (a) those who had remained, (b) those who had migrated, and (c) those who intended to migrate, Nabila found sharp differences between the educational background of each group. Of the "stayers" (those who remained in the community), only 19.6 percent possessed education; of the actual migrants, 37.4 percent possessed education; and of the "intending migrants," 47.3 percent possessed education. (Here it was important to note that education had only recently become widespread; many of the "actual migrants" did not have the schooling that those who were "intending migrants" possessed.) Dividing his population by the date individuals decided to migrate, Nabila found, moreover, that the educational threshold for migration was rising; by the time of his study, as noted, it was most often middle school attendance that preceded migration. Nonetheless, he did not find that those with less education were disinclined to leave; rather, he concluded:

> The role of education in pushing people out of rural areas is so strong that even the person who drops out early in primary school may regard himself as a misfit in the rural environment and therefore migrates.

While observing that education tended to "push" people from the rural area, he found it was an interplay of opportunities at home and level of education attained that determined who migrated:

> In regions where the level of education is low and yet there are no job opportunities at home, the majority of the movers will be the uneducated. However, when educational facilities are increased, the greater proportion of young movers will be those who are educated.

In short, lack of education does not constrain persons from migrating when work at home is scarce or unavailable, even though possession of education is a selective factor encouraging migration as schools become available. In studying migration, then, Nabila found education once again to be serving a function it has often been called upon to serve in relation to the economy and the job market: It is not primarily an instrument that creates jobs; it is rather a sorting device that determines who shall secure what jobs and where.

Other evidence from Ghana supports the conclusion that it is not education alone, but rather education in connection with perceived employment opportunities and earnings levels at home and in the urban area that attracts the school leaver from the rural area to the urban center. Boakye (1973), for example, found that the rate of unemployment among school leavers eighteen months after leaving school was 61 percent in villages as contrasted with only 40 percent in towns. Peil (1970), on the basis of her survey of school leavers from over 300 Ghanaian middle schools, found that those who had migrated had the best chance of finding work and that only one-sixth of the boys and one-sixteenth of the girls in her sample had found work in farming. If these figures are typical of those in a wider range of African countries, and if the conclusion of our first chapter--that school leavers are not irrevocably opposed to farming--is correct, one must conclude either that cultural or economic constraints effectively prevent large numbers of the young from taking up work in their home area, or that incentives, as viewed by the young, to go to the city outweigh perceived local opportunities.

The most recent, and in many ways the most telling, of the studies in Ghana was Rhoda's (1979) survey of rural middle school leavers. In order to determine how many of these school leavers migrated, the characteristics which distinguished migrants from those who did not migrate, the distances and destinations to which school leavers migrated, and the activities and employment of former school leavers, he employed a spatially stratified sample and focused his study primarily on students who did not continue their education. After sending to middle school headmasters a questionnaire requesting information on students 18 to 22 months after they had completed school, he secured data on 4,648 middle school leavers, of whom 832 had migrated to major urban areas and were not continuing their education. Since a parallel study investigating unemployment had been conducted by Mabey (1977) at the Institute for Statistical, Social and Economic Research at the University of Ghana, Rhoda was able to base his empirical conclusions on the data from that study as well as his own.

Noting that "the school leaver problem is characterized by the inability of pupils to get involved in productive activities after completion of school," Rhoda found almost 20 percent were continuing school, about 12 percent were serving as apprentices, some 30 percent were helping their families with work (chiefly on the farm), some 10 percent (of the boys) had formal-sector employment, and a small number were either awaiting entrance to school or (among the girls)[5] were married or with child. Only 10 percent of those who had completed middle school were found to be unemployed.[6] When combined with data from Mabey's (1977) urban survey, Rhoda's data led him to conclude that rural school leavers were less likely to continue in school and more likely to help their families with work than urban school leavers. This difference can be accounted for by a number of factors: urban students regularly perform better on secondary entrance examinations than do rural students; inexpensive day schools are situated primarily in urban areas; and urban incomes are more likely to permit parents to support their sons and daughters through additional schooling. When Rhoda compared the occupations of the male middle school leavers in his study of the 1975 class with those in Bezanson's (1971) study of school leavers in the 1970 class, he found that a smaller percentage appeared to be looking for jobs and a smaller percentage was actually unemployed, but a larger percentage was employed and even a larger percentage was helping within the family. The relatively small percentage looking for work, including both those who had not yet found work and those who were changing jobs, does not suggest that the rural areas are creating insurmountable problems for cities by flooding them with unemployed school leavers.[7] It also does not suggest that migration is reversing its traditional allocative function by moving the work force from situations of high employment to situations of no employment.

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[5] In light of the very important part played by women in the rural economy, it is unfortunate so many of the studies conducted have concentrated exclusively or predominantly upon boys.

[6] The distinction between "unemployed" and "underemployed" is often unclear, partly because many who are in fact helping on their parents' farms are looking for paid work and consider themselves unemployed.

Like Peil before him, Rhoda found that not only was the search for employment the most important factor in encouraging rural school leaver migration to urban areas, but that migrants were, in fact, far more likely to have found jobs than those who remained behind. The importance of finding work in making the decision to migrate was also evidenced by the low rates of out-migration from areas where local employment opportunities abounded:

> For example, relatively few school leavers migrated from Brong-Ahofo, because this growing agricultural region has an excess demand for labor. Growth in this region, which is primarily due to its fairly abundant supply of arable land and expanded cocoa production, made Brong-Ahofo the only region, except Greater Accra, which had a net population gain from migration between the 1960 and 1970 censuses.

The availability of good arable land and crops that were economically rewarding in the home area are factors which have figured in some, but not all, field studies of migration that have been reported.

As important as the number of school leavers who migrate, however, is the number of migrants who miscalculate their future and are unable to find work or schooling in the urban area. Their alleged large numbers and potential for social disruption constitute, in fact, much of what is frequently referred to as the "school leaver problem;" they are, furthermore, considered such a serious loss to the rural area that various panaceas involving a radical altering or shortening of primary education are often advanced. In assessing the flow into Accra, the most conspicuous destination point in Ghana, Rhoda estimated that of the 67,398 middle school leavers from the class of 1975 in Ghana, only 3,233 or 4.8 percent were looking for jobs in Accra some 18 to 22 months after completing middle school. When these populations were further divided to determine what percentage of those who had completed middle school in other regions were looking for jobs in Accra, the figure dropped to 3.7 percent. Although even this small percentage of rural school leavers appears to create social problems in the city and in an economy where school leavers are being produced more rapidly than jobs in the modern sector of the economy are being created, it scarcely suggests that the growing body of urban unemployed provides convincing evidence that the countryside is being denuded by the departure of literate and educated youth.

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[7] In this regard, it is interesting to note that Rhoda's conclusions stand in sharp contrast with Dumont's popularized observations in L'Afrique Noire est Mal Partie, a publication that did much to inflame the debate on the inappropriateness of African rural education. Charging that the school in Africa obstructed progress, Dumont observed of francophone Africa: "Pushed by his parents, a peasant child quickly realizes he can never go very far in agriculture; the only way to get ahead is to get out. He goes to school and works very hard to this end, sometimes at the price of incredible sacrifices....Today the Republic of the Congo (Brazzaville), Gabon and Southern Cameroon boast of sending 60 to 80 percent of the children to school; but they are thereby filling up the village, later the town streets with jobless and idle youths....Before long, these young people end up in the shanty-town of capitals and become social parasites."

More important from the perspective of those in the countryside, however, is that migration, in effect, polarizes development. When the urban concentration of educational facilities and other attractions encourages youngsters to migrate to the urban centers, in time an increasingly wide gulf develops between the urban center (especially the capital) and the countryside. As Rhoda notes in Ghana:

> Educationally selective migration forms a vital link in a system of processes leading to ever-increasing spatial inequities. Survey and other data suggest that these processes operate in Ghana and lead to the concentration of development in Greater Accra Region. Major industries, businesses, and government agencies in Ghana are primarily located in Accra. The concentration of school leavers and other trained manpower in Accra provides an important incentive for new industries and businesses to locate in Accra. These, in turn, provide more jobs which may stimulate even greater school leaver migration to Accra. In summary, the vicious circle of polarized development appears to be operating in Ghana.

This is not a problem which cutting back on primary education or raising the initial age of entry will solve, but it is a serious problem--one upon which redistributing secondary schools may have limited effect.

Although the evidence from the Peil and Rhoda studies in Ghana emphasized that finding employment was critical in making the decision to migrate, the other element of the economic equation--the differential in income earned in rural and urban areas and between the educated and uneducated migrants in the urban areas--stands out more clearly in a study in Sierra Leone by Byerlee, Tommy, and Fatoo (1976, 1977). The researchers chose at random twenty households from each of three census enumeration areas within each of eight resource areas in the country. In all, the study surveyed some 2,500 rural households and obtained from them the names of over 2,000 persons fifteen years of age and above who had migrated to urban areas. To assess the rates of rural-urban migration, the researchers first divided all migrants into three age groups (those less than 15 years of age, those 15 to 34 years of age, and those 35 years of age and older) and two educational levels--the uneducated (persons with less than five years of schooling) and the educated (persons with five or more years of schooling). They found that (1) the highest disposition to migrate was among the group between 15 and 34 years of age (probably in part a function of the education they possessed), and (2) the disposition of those with five or more years of schooling (the educated) was seven times greater than those without five years of education (the uneducated). This finding held for all ages and both sexes. They further found that the total net flow of educated persons in all age categories was higher in the direction of rural-urban migration. Thus, in Sierra Leone, as in the other West African countries examined here, more educated migrants moved to the cities than returned from them.

The reason for this was not hard to find. Urban dwellers with at least five years of education could expect to earn about 50 percent more than their uneducated counterparts in urban centers. An even more striking differential appeared when the earnings of youth 15 to 25 years of age with education were compared with the average rural wage. Even when unemployed migrants were included in the calculation, the average hourly income of urban migrants proved to be two and one-half times as great as the average income of their rural schoolmates. In these circumstances, it is easy to assume that relative rural and urban incomes played an important part in the decision of many of the educated to migrate.

The empirical evidence from Ghana and Sierra Leone--indicating that youth with education are most prone to migrate--is closely paralleled by evidence from Nigeria. In one of the pioneer studies including, in part, school leavers, Callaway (1963) surveyed over 2,000 members of the labor force in the city of Ibadan and found that three-quarters of those unemployed were school leavers and about one-half of these were immigrants. Of these, in turn, three-quarters had fathers who were predominantly farmers. Calcott (1967) and Mueller and Zevering (1969), working on the same data as one another, documented that over half of the 15-29 age group no longer lived in the rural environment and that it was largely the better-educated who were migrating. Essang and Mabawonku (1974), also studying migrants from villages in Western Nigeria, found a similar positive correlation between the rate of rural-urban migration and the level of education attained. The extent to which this migration of primary school leavers from rural areas occurs is also revealed by Ejiogu (1968) in a study of one of the principal receiving centers, Lagos. Here Ejiogu surprisingly found that more male migrants 15-24 years of age had primary education than did their Lagos-born counterparts--an unexpected result given the presumption that educational opportunities were more abundant for Lagos children than others. In most studies the empirical evidence sheds little light on whether it is predominantly high urban incomes or unemployment in the rural area that motivates the youngster to migrate. In this regard, the evidence from Nigeria parallels that from Ghana and Sierra Leone but sheds little new light on the motives for migration.

It is, of course, difficult to assess the relative influence upon migration of lack of opportunity in the rural area and the likelihood of increased income in the urban area. In part, this is because quantifying rural income in ways that would allow a reasonable comparison with urban wage rates is difficult. Yet evidence has led scholars in both Ghana and Nigeria to emphasize the employment factor as crucial in the decision to migrate. Rourke and Sakyi-Gyinae (1972) found in their study of southern Ghana, for example, that little difference existed between actual daily wage rates for agricultural laborers and the minimum wage in urban centers. They concluded that migrants were more affected by the differing levels of underemployment in the rural area and urban areas than income differentials. In assessing his data on the labor force in Ibadan, Callaway (1963) likewise concluded that factors in the home area largely determined the level of migration in Nigeria:

> Taking the country as a whole, the proportion of school leavers who migrate from any particular area depends on the level of farm income, the availability of fertile land, and the date of the spread of education. At one extreme are areas where there is a heavy population pressure against limited land and where education has been introduced at an early date; here, 90 percent or more of the school leavers will follow the already marked lines of migration to the cities....For them there is no alternative; they cannot make a living by returning to the farm.

This would tend to support our initial reservation about the impact of schooling in creating the problem of the "unemployed school leaver," by suggesting instead that rising rural population pressure on the land may be a more nearly universal ingredient in the decision to migrate.

To look for purely economic factors in the equation that leads youth to migrate is, perhaps, too simplistic an approach. In Sierra Leone, for example, Byerlee, Tommy, and Fatoo (1976) found that 40 percent migrated for further schooling,[8] 25 percent for employment, and 20 percent for marriage. It is significant, however, that economic rewards are not necessarily ends in themselves: economic gains provide access to amenities and increased social prestige. In Sierra Leone it was found that rural-urban migrants left the countryside in the hope of finding not only a higher-paying job but also the higher social status and improved social life that would accompany it. In providing for upward social mobility as well as geographic mobility, then, education in Sierra Leone was playing a role it has traditionally performed in most societies.

Others offer different explanations for the migration of rural youth to the cities. There is, to be sure, an abundance of speculative literature that links migration to the lure of the "bright lights" of the city, but a detailed investigation by Hill (1975) is more relevant than common speculation in our present survey of field research literature. Her study of two Fante food-farming villages and more general inquiries in four additional villages offer more than mere speculation. Finding that virtually all young men migrated from the village to urban areas, only to return generally at middle age, and that only half the young men 15 to 24 in the larger of the villages were educated, she concluded that one had to look beyond schooling to find an explanation for migration. She found this explanation in culturally defined behavior, which need not concern us here, and in a generalized conception of the process of growing up:

> The fact that migrations from the Fante villages were unconnected with schooling was actually consistent with my long-held general belief that the hiatus between adolescence and full adulthood is, and always has been, an awkward restless period, so that a young man's reluctance to work with his father might happen to be a far more fundamental explanation of his desire to migrate than the matter of his schooling.

In light of the other studies cited, however, one may accept this finding as one of those rare exceptions to what she referred to as her own conviction that:

> If there is any rule about the factors determining the nature and incidence of outward migration, it is that there are no general principles which are everywhere applicable, not even demographic principles.

But even accepting that differing complexes of variables lead to different forms of behavior, one cannot help but conclude that in West Africa the preponderance of evidence points to employment opportunities and income differentials as two very crucial factors in the decision of educated youth to migrate.

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[8] Opportunities for post-primary education in Sierra Leone are notably higher in Freetown. Greater educational opportunities in urban areas is a typical phenomenon in Africa (cf. pp. 44-46).

The Impact of Education on Rural-Urban Migration in East Africa

The impact of schooling on rural-urban migration in West Africa has been closely paralleled in East Africa. As long ago as 1958, the Government of Uganda requested that the East African Institute of Social Research undertake a study of primary school pupils in the upper grades, noting, "There has been widespread anxiety lest children from the higher primary classes should drift into the towns and form groups of 'dead-end kids' there." Evidence from this study, conducted by Susan Elkan (1960), revealed that in 1957 no more than 34 students out of a total of 1,238 enrolled in the four representative schools she studied went to the city in search of work. But the inability of urban economies to absorb even the number of school leavers that this representative sample suggested, was to increase rapidly, for the small percentage of students who were completing school accelerated rapidly until it became a problem of significant proportions, not only in Uganda but throughout East Africa. As the problem of unabsorbed school leavers increased and became more visible, not only were remedial programs advanced (sometimes on a crash basis) but further studies of the migration progress were carried out. Four of these call for more detailed attention.

In one of the most extensive studies of migration in East Africa, Todaro (1971) took a random sample of 1,444 men residents in Kenya's eight largest urban centers in 1969 and examined their educational background by dividing them into four categories: (a) those with no formal education, (b) those who had completed one to four years of school, (c) those with five to eight years of education, and (d) those who had completed their secondary education. Twenty-five percent of the migrants in his sample had completed at least one year of secondary school (with the majority of these having completed three or more years), an additional 47 percent had finished five to eight years of formal schooling, and in all, nearly 75 percent had successfully completed primary education. In accounting for the propensity to migrate, Todaro concluded that it was influenced by the perceived income differential between urban and rural occupations, the cultural and social amenities of the city, and apparent distaste for farming and manual labor. (The last factor is cast in some doubt by the attitudinal studies of school children and school leavers mentioned in the first chapter.) Of the factors identified, Todaro concluded that the economic differentials, differentials which increased with the level of education, became the most important single factor in accounting for this mass migration:

> (Our) data provided us with a preliminary indication of the positive relationship between educational attainment and the propensity to migrate. We can explain this observed relationship in terms of our migration model since our data reveals that average urban earnings vary directly with educational attainment.

The model to which Todaro refers, a model initially suggested by his Kenyan data but as yet not uniformly confirmed by tests elsewhere, finds the chief explanatory variable in accounting for migration to be the appeal of perceived urban incomes. The appeal of higher incomes, however, is not merely a matter of size or increasing size relative to rural incomes, but is also a matter of the probability of finding employment in a tight labor market. The model also accounts for the willingness to remain in the city as an unemployed school leaver. Todaro argues, for example, that if urban wages are considered to amount to 100 units per annum and rural income to only 20 units per annum, the migrant's decision to opt for a time span of searching that would otherwise have earned 60 units in the rural area would still be a rational economic decision on his part. Thus, unemployed rural school leavers may elect to stay in the city for several years searching for employment.

The assumption that the school leaver makes a reasonable economic calculation would help account for his continued presence in the urban area in two ways. First, most school leavers in African countries are young and without the family responsibilities which would press upon older migrants. They are thus able to survive on underemployment for a longer period of time. Second, school leavers who decide to survive on underemployment in the cities can rationally expect a higher differential between (a) the income they will receive when they find full employment and (b) the rural income they might expect if they returned home, than would be the case with the uneducated whose urban incomes are unlikely to exceed by any considerable amount the rural incomes they might expect to earn. (Todaro reported in 1968 that those employed in the urban center who had 0-4 years of schooling might expect to earn 102 Kenya pounds, those with 5-8 years of primary schooling might expect to earn 156 Kenya pounds, while those who had completed secondary education might expect to earn 290 Kenya pounds.) Thus, if Todaro is correct in judging that the migrant is deciding rationally when to migrate and when to return to the rural area--by considering both probable earning and his job-searching horizon, he is likely to remain in the city searching for a job for some time. The migrant's conclusions, Todaro implies, make personal economic sense.

Both Todaro's conclusions on the importance of perceived differentials between rural and urban incomes as they relate to education, and our earlier skepticism that there is regularly a shortage of labor in agricultural areas in Africa, are supported by Rempel's (1976) findings in Kenya. When young men with some or complete primary schooling migrated to urban areas, they found a high differential in income before and after migrating. Table 10 clearly reveals that these differentials rise with level of education. But Rempel did not find that the decision to migrate came solely from these differentials in educational level; rather, the relatively low income in the rural areas was closely associated with lack of farming opportunities, or at least opportunities for farming on one's own. In his words:

> One of the reasons why relatively few men were farming prior to migration is that only one-third of the men have land which they can farm. In addition, 31 percent of the migrants either no longer have a father or their father has no land. Therefore, the majority of the migrants are landless and almost one-half of the men without land have no prospect of obtaining land unless they can earn sufficient money to purchase it.

Hence, the drive to the cities. Thus, the two common circumstances in West Africa (a considerable number of landless rural inhabitants with schooling, and income differentials between urban migrants and rural stayers that increase as the level of education rises) appear to be characteristic of East Africa as well.

Todaro's belief that the relation of education to income is the crucial factor in the decision to migrate is also supported by data from neighboring Tanzania. Sabot (1972), in the previously cited study on Tanzania, and Barnum and Sabot (1976) found the same factors operating to encourage rural-urban migration in Tanzania as were operating in most other African countries. Using data on migrants in Dar es Salaam and six Town Areas in Tanzania, Sabot found there were proportionately 2 1/2 times as many educated migrants as there were educated persons 14 years of age or older in the rural population. Conversely, he found only half as many migrants without education among rural-urban migrants 14 and over as compared to the corresponding age group in the rural population. He discovered, finally, that the higher the level of education, the higher the rate of migration, both to Dar es Salaam and to the six Town Areas studied.

TABLE 10 -- AVERAGE CASH INCOME PER MONTH WITHIN EACH EDUCATIONAL GROUP (Kenya Shillings)[a]

BY PROVINCE PRIOR TO IMMIGRATION				BY URBAN CENTER IN FIRST YEAR AFTER IMMIGRATION			
Province	No Formal Education	Education Standard		Urban Center	No Formal Education	Education Standard	
		1-4	5-8			1-4	5-8
Nyanza	27	44	75	Kisumu	112	139	154
Western	18	23	137	Eldoret	43	72	108
Rift Valley	50	69	116	Nakuru	98	137	106
Central	35	61	93	Nyeri	93	177	225
Eastern	25	18	97	Nanyuki	105	144	238
Coast	20	30	67	Thika	175	117	166
				Nairobi	148	120	197
				Mombasa	137	141	133

[a] Kenya Shillings: 1 shilling = U.S. 14¢.

Source: Rempel (1976).

From his data he also determined the rates of change in the pattern of migration since Independence, a time when citizens' expectations rose markedly and provision of education grew rapidly. He found, for example, that of the males migrating before Independence, 22 percent were uneducated, while in the group who had arrived since Independence, only 14 percent possessed no formal education and this figure declined to 7 percent by 1970. Education, while not a sine qua non for migration before Independence, was rapidly approaching that status in the post-Independence years.[9]

Such high correlations between the level of education and the rate of migration led Sabot to conclude:

> People living in rural areas who have been to school are far more likely to migrate than people who have had no formal education whatsoever. The more education a person has had the more likely it is that he will leave his home area, leave the familiar way of life of his parents and the majority of his tribe, leave a future that is directly tied to the land for provision of food and money, and make his way to town.

He found the causes for this to be twofold. First, education has paid off financially in urban areas in Tanzania, whereas it has been less likely to do so in rural areas. Whether or not education is specifically related to a job, policies and practices favor the educated for any job available and urban wages and salaries are tied directly to the level of education an applicant possesses. This is not the case with rural occupations or employment. Second, schooling appears to encourage movement to the towns for two "psychological" reasons. Even limited schooling loosens traditional bonds and changes tastes and aspirations. Furthermore, because parents expect their offspring to subsequently go to the urban area and acquire work, children are pre-selected to attend school. Thus, the child with even limited education has been predisposed to set off for the city in order to meet parental expectations.

Sabot points out one very important caution to be taken when interpreting figures that show the impact of education on rural-urban migration. While it appears clear that education does contribute to migration, this by no means demonstrates that the rural areas are being denuded of educated persons. In

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[9] That this may be a temporary phenomenon, however, is revealed by Zachariah and Conde (1978) who found on the basis of census data in Ghana that the educational level of rural-urban migrants had actually declined between 1960 and 1970, a change they attributed to increasing population pressure in rural areas that encouraged even illiterates with poor urban income prospects to migrate.

Tanzania, for example, even though education was correlated positively with migration, the number of educated among the younger age groups remaining in the rural areas was growing at the same time. This resulted from a growth of education that exceeded growth of migration.

Further insight into primary education and migration in Tanzania was revealed by the CESO interdisciplinary study of school leavers in the rural community of Bukumbi of Mwanza Region (referred to in Chapter I). Kaayk's (1976) analysis, which attempted to determine both the place of residence of 111 students who had completed primary school and the factors which determined that place of residence, is illuminating. When he omitted those who continued on to some form of post-primary education, he concluded of his primary school leavers:

> In so far as they looked for jobs, they did so rather superficially. Only if they could board and lodge with relatives in town or at other centers did they seriously search for jobs. A minority of 23 percent of all school leavers had succeeded in finding jobs in Mwanza, Geita, or Bukumbi. More than half farmed in Bukumbi or in Geita (with or without additional jobs). About 19 percent proved untraceable....Finally, it appeared that about 83 percent were working on the land and only 17 percent in the towns.
>
> Their motive for wanting a job was to obtain a higher income....Only 7 out of 35 had gone in search of another occupation as a result of their objection to the traditional pattern of life....
>
> The so-called problem of the primary school leavers apparently did not consist of the alarming tendency to migrate to town. The pupils already seemed to have solved the conflict between their ambitions and the actual state of affairs. Of the 111 school leavers from Bukumbi, only 19 had migrated to town and without exception they had all found work there. One could conclude that there was a circular migration from Bukumbi of school leavers who searched for a job in town for shorter or longer periods, but who returned home when they did not find one. They did not loiter around as unemployed and as potential delinquents as was officially assumed.

If those who remained behind or engaged in short-term circular migration are more innovative and productive than the uneducated, then, the school does not necessarily render a disservice to the rural areas when it provides a small percentage with a path to the city. It is to the resultant question of whether those educated who remain behind are proving to be more innovative and more productive, that we shall turn in the next chapter, in attempting to answer our broader question of whether or not the school is the enemy of the farm. Before turning to the question of productivity or innovativeness of school leavers, however, there are two further school-related characteristics of rural-urban migration which deserve direct consideration: the impact of the search for post-primary education upon migration and the returns which may flow back to the rural community from rural-urban migration.

Rural-Urban Migration for Further Schooling

High rates of migration among those with schooling and recognition that wage or salaried employment and economic rewards are their ultimate goal, should not disguise the fact that a large percentage of migration into urban centers is migration in search of additional schooling. The reasons for this are not hard to come by. Access to education is greatest in urban centers (as indicated in the annual reports of Ministries of Education in almost all African countries). Furthermore, for many youngsters in most rural areas the only alternative to the prohibitively expensive secondary boarding school is the secondary day school, a type of school located almost invariably in the cities. If a student has passed his secondary school entrance exam, a viable option is to attend school, live with family or relatives in the city, and/or earn the small money required to cover most additional expenses. The result is an exodus of eligible secondary school students to the cities, as documented in numerous research reports. In Sierra Leone, for instance, Byerlee, Tommy, and Fatoo (1976) found that 40 percent of their rural-urban migrants had moved to the city for schooling, whereas by contrast only 25 percent had migrated directly in search of employment.[10]

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[10] These percentages may actually understate the direct, albeit complex, role that the search for schooling plays in encouraging rural-urban migration in Sierra Leone. Commenting on the role of education in stimulating migration in that country, Ridell (1978) has pointed out that education leads not only to the migration of school children but to the migration of families:

> ....educational opportunities are an important part of the urban-rural differential which is the major cause of migration. In this sense, many move to the towns in the expectation that their children will then be able to go to school, the prerequisite to economic advancement in the eyes of most parents, who expect that the financial rewards of such an investment will extend to the family unit. Again this leads to a perplexing situation in that attempts to remedy educational disparities result in the location of institutions which have been associated with the stimulation of migration from the rural areas.

In many other parts of Africa it appears to be more common for school children migrating to cities to live with members of the extended family, with those originating from their village, and/or as domestic servants in homes.

Peil (1972), drawing on data from a tracer study of Ghanaian middle school leavers (the middle school being the regular terminal point for most Ghanaian students who have progressed this far), commented on a common situation confronted by primary school leavers in many African countries:

> Post-middle day schools (secondary, commercial, and technical) are concentrated in the cities, especially in Accra, and expenses are considerably lower in these than at boarding schools. Many young middle school leavers come to the cities each year hoping to continue their education while supporting themselves as stewards, car cleaners, or with other casual work.

In a survey conducted a decade later, Rhoda (1979) found that about 60 percent of middle school leavers who were furthering their education in Ghana had migrated in order to do so, whereas only some 40 percent of their classmates not seeking further education had migrated. Amachree (1970), surveying farm families among the Kissi in Liberia, found that 15 percent of the migrants in these families left to seek further schooling. Similarly, Olusanya (1969) found that 15 percent of the migrants from the rural villages in Western Nigeria had first migrated to acquire additional education.

Across the continent, Kinyanjui (1974) reported that a heavy concentration of post-primary schools were located in urban centers and that this helped account for much of the rural-urban migration in that country. Kaayk (1976) found that 72 of 194 primary school graduates in Bukumbi, Mwanza Region, Tanzania left the community for post-primary education and none had returned to resettle by the time of his study. In a comparable case in Ethiopia, Palen (1976) reported that the nation's capital served as the principal magnet:

> Addis Ababa is the natural center of all those who wish to continue their education beyond primary school. Roughly 30 percent of the migrants to the city are aged 10-19. The city, according to Ministry of Education figures, has 38 percent of all secondary school students in the country.

He found that education ranked only behind "employment" and "family ties" in accounting for migration in his urban survey. In neighboring Sudan, Oberoi (1977) used data from the ILO study of growth, employment, and equity in that country to report that 16 percent of the rural-urban migrants had come to the city in search of additional education. This percentage, too, was significantly surpassed only by the number who came to seek employment. Thus, the attraction to rural youth of greater access to post-primary and higher education that regularly exists in urban centers appears one further common ingredient between West and East Africa in their patterns of rural-urban migration. Because post-primary education is a passport to highly remunerated modern sector employment and until recently has provided virtual assurance that such employment could be found, this quest for education may in most respects be considered a surrogate for economic and status motivations. Since those with secondary or higher education are, for economic reasons, even less likely than primary school leavers to resettle in the rural areas, they do in this respect constitute an immediate loss of labor to the countryside. To the extent that those who receive further education in the cities remain in urban areas, the rural primary schools must be counted as partially contributing to the loss of this educated rural manpower--a loss which often persists until the former student's retirement age. But some of those with post-primary education do in fact return to rural areas, although less often as farmers than as teachers or government servants. Those who return in these capacities make a contribution to rural development, but seldom by directly increasing the productivity of the farm from which they originally came. Unfortunately, research has thus far failed to indicate just what percentage of those who leave the rural area in search of post-primary education do return to make even this indirect contribution.

Income Transfers and Other Returns From Urban Migration

The picture of the effects of rural-urban migration is incomplete without taking into account the returns to the rural areas which accrue from those who have migrated to cities. In light of the relative poverty of rural families, these returns have often been considerable. A most obvious benefit has been the flow of cash and goods from migrants to the rural areas--presumably a flow that is greater from the educated with their higher earnings than from the uneducated whose cost of living consumes much of what they earn. Gaude and Peak (1976), in surveying the literature on the scale of urban remittances in relation to rural income worldwide, found conflicting results in empirical studies: while some evidence indicated that remittances are usually sizable, other studies found them negligible. More evidence on the extent of this flow in Africa is accumulating.

A study by Adepoju (1974) of migrants in Oshogbu in southwestern Nigeria focused directly on this flow back to the rural area. Most respondents in Oshogbu reported that they sent money--usually a substantial portion of their income--back to their parents and relatives at home. About half of those reporting such remittances indicated that they sent money between nine and twelve times a year.

But such contributions are not necessarily individual. In southern Nigeria and in other parts of the continent, migrants join "improvement unions" that contribute to rural area self-help schemes, schemes which are devoted to such projects as building schools, hospitals, roads, or even community plantations (cf. Smock, 1969). Adepoju's data, in sum, showed that "a substantial part of the migrants' income flows out in the form of remittances, gifts, and savings to the migrants' home communities," thus providing some of the needed capital for rural development and the amenities which may in time decrease out-migration.

Similar results from studies of the economic benefits of migration to rural areas--and to urban areas as money flows back and forth--are reported elsewhere. Caldwell (1969) in Ghana concluded that "in economic terms the most important aspect of rural-urban migration is the counterflow of remitted money and of goods which characterizes the migration stream." He found in respect to rural benefits that at least two-fifths of those families from which migrants had departed claimed to receive money from their urban family members. Similarly, two-thirds of the urban dwellers who were migrants reported sending money to the rural area. In all, he estimated that perhaps one-third of the rural families were receiving money from migrants and that the number was growing rapidly. In half of these cases, he found that remittances were made at least monthly and many of these were of considerable size.

Most evidence from West Africa parallels the findings of Adepoju and of Caldwell. Thus, Dubois (1970) estimated that the average amount remitted in the Ivory Coast came to $80.00 and equaled, in most instances, the yearly earnings of a worker in the savannah lands of northern Ivory Coast. Byerlee et al. (1977) calculated that in Sierra Leone about 5 percent of urban earnings of migrants were remitted to the rural area. In the only study where rural-urban remittals exceeded urban-rural remittals, Essang and Mabawonku (1974) found that in five of the six villages they studied in Nigeria, more money was transferred from the rural to the urban area than was remitted from the urban to the rural area. Inasmuch as many rural-urban remittals pay for the education of children attending schools in urban centers, the quest for schooling may have the immediate effect of reducing capital otherwise available for increasing production or improving the standard of living in the rural area. Even when school fees are calculated in computing net remittances--fees that generally flow from the rural to the urban area, the net flow of cash and goods in West Africa appears in all other reported studies to be from migrants to their home areas.

These remittances to the rural area may be highly significant, especially to the African smallholder. Waters (1973), for example, concluded not only that the absence of working capital was a major constraint on growth of output on farms, but that the desire to eliminate this constraint was one of the major causes of migration to cities. More generally, he saw remittances as contributing to rural development in two ways:

> Remittances, flowing in the opposite direction to the stream of migrants, have a dual impact on the basic dichotomy which exists between the rural and urban sectors of African nations. There is an immediate distributional and welfare effect as the remittances permit a higher level of current consumption in rural areas while reducing it in the cities, and there is a longer-run distributive effect via the increased availability of working capital to the growing smallholder agricultural sector.

He was the first to admit, however, that the long-term effect brought about by increasing working capital had not been sufficiently studied by economists to determine its effective contributions.

That this effect has not been great is suggested by Johnson and Whitelaw (1971) in one of the few East African studies available. Although they established in their study of African households that approximately 20 percent of urban wages received was regularly remitted to the rural area by migrants, they also found that little of this was intended directly for farm maintenance or improvement. More frequently, it was for the support of a family, notably a wife and children. Their study, however, adds credence to our supposition that the amount of schooling tends to affect the size of remittances, for Johnson and Whitelaw found a positive relationship between the level of education of the migrant and the size of remittance he made. If this is generally the case, the relationship of schooling to remittance size would, in effect, more than offset the rural monies that were earlier spent on sending youngsters to school. It would, however, scarcely offset the total rural contribution to the cost of education in countries where government expenditures for education are largely derived from taxing farmers indirectly through mechanisms such as government marketing boards.

Two other studies in Kenya, however, not only regard remittances as very important in sustaining rural households and promoting rural productivity but raise questions about the framework through which the whole pattern of migration and exchanges has been traditionally viewed. Specifically, both J. Moock (1978, 1979) and Weisner (1976) question the fruitfulness of analyzing migration as a process whereby a person moves out of a rural socioeconomic system and enters a separate urban socioeconomic system. Rather, instead of viewing migrants and migration as unique parts of an urban socioeconomic system or a distinct rural socioeconomic system, they see them as acting in a rural-urban socioeconomic system in which their economic life is determined by two sources of income. Their decisions involve exchanges and allocations of resources earned to meet the needs of those persons predominantly located at both the rural and urban ends of this binding rural-urban link. Similarly, their social life revolves around this rural-urban axis, which involves members of the social group simultaneously in both the rural and urban bases of the system. Many of these persons not only move frequently between city and rural locations, but in reality possess dual homes, one in the rural area and one in the city.

Moock found such a system to exist between Nairobi and South Maragoli, a countryside location about 250 miles northwest of Nairobi, while Weisner found a very similar system existing between Nairobi and Kisa in Bulawaya Province. In such a rural-urban socioeconomic system, Weisner found a mixture of life experience patterns appeared: (1) some spent much of their life as actual migrants, but returned in time to a home base; (2) others remained potential migrants only, never going to the city; and (3) most divided their working lifetime between migration and fulfilling their roles in the rural area. Many "city" and "rural" people, he found, engaged simultaneously in two occupations, and he judged that this kind of rural-urban socioeconomic system prevailed not only throughout much of Kenya but in greater or lesser degree throughout much of sub-Saharan Africa. Within these systems, many rural homesteads relied increasingly on remittances of cash from their corresponding urban locations and at the same time offered a rural alternative to those who had migrated and especially to those who at a later point wished to return home.

It is Moock, however, who most closely examined the flow of money within such a socioeconomic system. In South Maragoli she found that while there was a flow of cash each way between migrant farm heads who were in the city and their family and friends in the rural area, the flow was primarily from the urban to the rural area. Of the 64 migrant farm heads surveyed, 83 percent sent home remittances during 1971 while only 19 percent received funds from the countryside during the same period. Funds sent to a migrant were regularly intended to finance his search for a job, and in half of these cases the migrant later reciprocated with a larger cash gift to the donor. On average, Moock found, farm head migrants remitted 30 percent of their annual urban wage to family and friends at home.

Since academic credentials are virtually required to secure urban employment in Kenya, it is increasingly the migrants with schooling who are able to make substantial remittances to the rural area. Perhaps equally or more important, however, is Moock's conclusion that a combination of urban and farm income and of urban and farm employment has become the economic system of migrant workers and their families in South Maragoli and, presumably, in many other African communities as well.

Whether or not such a system provides the best framework for analyzing migrant-rural transactions, it would be short-sighted to consider only the flow of such benefits as cash and goods from migrants to the rural areas. Most conspicuously, trained or educated persons also return and make a distinctive contribution to the rural area. Byerlee et al. (1976) found that about four times as many urban-rural migrants engaged in non-farm occupations as did non-migrants, reflecting in part the lower apprenticeship fees in cities. Liedholm and Chuta (1976) reported in their Sierra Leone study that 13 percent of those who had returned to the rural area brought with them skills acquired through apprenticeships in trades important in rural non-farm industry. Such skills and occupations are crucial not only in increasing agricultural productivity but in promoting rural development more broadly.

The judgment that all remittances contribute positively to the farm or the rural area is not universal, however, and the possibility that remittances detract from productivity must also be considered. The chief evidence to this effect has been amassed by Rempel and Lobdell (1979) in a study that was worldwide but relied primarily on African data. Acknowledging that generally--but not always--sizable remittances flow from urban to rural areas, they question how these remittances are used and whether the uses to which they are put actually increase or decrease the agricultural development of the migrant's home farm. Going beyond their own 1968 survey of 1,091 recent in-migrants in Kenyan urban centers, they found that 59 percent of the men were making monthly remittances that amounted to approximately 22 percent of the average earned income. Other studies such as those of Sabot (1972), Caldwell (1969), Johnson and Whitelaw (1974), and Adepogu (1974) found similarly high percentages of migrants making remittances--in some instances on a monthly basis. Summarizing the African experience, Rempel and Lobdell noted:

> ...This survey of the literature indicates that the volume of remittances varies considerably from one rural community to another. The practice of remitting funds is predominantly an African phenomenon but it is evident in a number of Asian and in some Latin American countries as well.

It is one thing, however, to note that remittances are a common practice and quite another to determine *who* contributes *to whom* and *how the money contributed is used*. First, Rempel and Lobdell raise some doubt that it is the educated who are making a singularly large contribution. While they note that in both the study by Johnson and Whitelaw (1974) and their own study the evidence indicates that the level of education is positively correlated with remittances to the rural area, the correlation--especially in their own study--suggests that the remittances probably constitute little more than a repayment of the social debt migrants had accumulated when securing their own education. Second, most remittances are made to persons in the immediate family who require support for sustenance and schooling. Third, as Lawson (1972) had noted in the Lower Volta, remittances are often a form of social security. They found that those remitting to the rural area generally had access to land and expressed an interest in retiring to their home areas at some later date. These three reasons--repayment of school debts, support of immediate family, and plans for retirement in the home area--do not support the conclusion that remittances from migrants directly increase agricultural productivity at home.

Instead, Rempel and Lobdell counter that such is not the case. First, they argue, evidence does not indicate that migrants are dispatched to urban areas chiefly to generate capital. Second, given the evidence they surveyed on the use of remittances, they argue that "in most cases where rural areas receive substantial remittances it seems certain that very little is used directly as investment for rural development." They conclude that factors such as paying debts, providing school for relatives, and purchasing consumption goods constitute between 80 and 90 percent of rural remittances. These remittances, in their judgment, serve the self-interest of the migrant (and *not* a self-interest that is associated positively with increased productivity).

But rural development is assuredly more than agricultural productivity. It is, after all, improvement in the quality of life that constitutes rural development and, indirectly, serves the farm. Thus, when Africans contribute to building or improving a school, constructing a health clinic, or developing a water supply system, they are contributing to the social well-being of the community and, by doing this, are proving themselves friends of the rural community.

But Rempel and Lobdell challenge even this idea. Essentially, theirs is an argument that remittances *retard* rather than *accelerate* rural development:

> Although such remittances serve a useful income redistribution function, they also can be seen as the means of maintaining the traditional system in rural areas. The need for any one village to adapt to a changing environment is reduced precisely because of remittances. Therefore, it is not merely a matter of a failure to use the remittances for development purposes; they may be used for the opposite purpose of delaying the changes required for rural development.

Although the evidence Rempel and Lobdell have assembled suggests that production is not increased--and may be decreased--by urban-rural remittances (since traditional patterns are sustained by these remittances), it is difficult not to conclude that changes are occurring and will continue to occur in rural areas, changes that are a result to no small extent of the capital provided by the rural-urban migrant.

Yet it is not only capital but ideas and attitudes that may be acquired and transmitted through migration. Adepoju (1974) reported that many Nigerian migrants in his sample (some 40 percent), like those in South Maragoli, migrated home frequently and that over three-quarters could be regarded as regular visitors to their places of origin. These rural-urban migrants were also frequently visited in the city by their relatives. Such contacts, he concluded, provided a type of "cosmopolite" experience, and since those who are successfully employed in town are often regarded as pace-setters, these visits could serve as a source of new ideas and a stimulus for innovation in the rural area. His judgment is not unsupported. Bugnicourt (1974), in assessing the impact of the migrant on the rural areas in francophone West Africa, found that the migrant greatly influenced attitudes, albeit this influence proved complex. On the one hand, he discovered, new values found their way into the village through the migrant, as Adepoju had judged. On the other hand, unfortunately, the innovations introduced in the rural areas were not necessarily productive. In summary, Bugnicourt concluded of migrants that "although they have acquired a technological attitude and industrial mentality, their new skills are not very often relevant to (the rural area). Reports by returning migrants are a further stimulus for others to leave and this has an immobilizing effect (on the rural area)." Thus an interchange of persons between rural and urban areas need not be counted prima facie as always providing positive gains for the rural area.

Returns to rural areas in the form of new attitudes and ideas have been less frequently researched than the return of persons or money; they may, indeed, be less amenable to rigorous research. Chief among the outcomes to be hoped for would be a receptivity or openness to new ideas that might be engendered by experience outside the migrant's previously circumscribed world. But here again the evidence from Africa is both scarce and contradictory. Vanzetti (1972) found that "cosmopolite" experience was not positively associated with innovations in agriculture in the two districts of Zambia which he studied, whereas Bowden and Moris (1969) found that among Baganda farmers, visits to Kampala were significantly correlated with modernity in farming as measured by their Modern Farmer Index. The clue to the difference in their findings may well lie in whether the rural areas from which they came constituted "modernizing environments," a matter to which we shall later return.

The evidence on the relationship of long- and medium-term rural-urban migration on agricultural development in Africa is particularly scanty. J. Moock (1978/9) did find, for example, that the innovations proposed by farm heads residing in the city were not as appropriate to farm efficiency as those initiated by farm managers who lived regularly in the rural area. Beyond that, however, most conclusions are little more than speculations. Some have speculated, as did Mueller and Zevering (1969), for example, that as migrants were youthful and more highly educated than those who remained behind, the rural areas were deprived of their dynamism and the disposition to innovate. Writing to this point, Gaude and Peak (1976) remark, on the basis of their worldwide survey, that while "the evidence from most migration surveys does seem to indicate that the typical migrant is in his twenties...no evidence exists that technological innovations are therefore less likely to be introduced." Certainly the relevant evidence from Africa is not yet in. The question of whether the school fosters openness and receptivity to innovation other than through the part it plays in the migration process is addressed in the following chapter.

Education and Rural-Urban Migration: The State of Our Knowledge and Implications for the Schools

The second question pursued in this monograph concerns the extent to which field studies have proved or disproved the charge that schools are the enemy of the farm because they set in motion a rural exodus that serves to impoverish the rural areas where children are born and educated. Here our answer is one of skepticism. While it has been universally demonstrated in Africa that the school is associated with migration, and most notably with rural-urban migration, it is doubtful that this has impoverished the rural areas. Rather, by facilitating rural-urban migration, the school may be having quite a salutary effect on most such areas.

Even while schooling is recognized as positively associated with the decision to migrate to rural areas, there is some variance in the evidence as to how much education makes a difference in affecting that decision. Some studies have indicated that the attainment of some four years of schooling, presumably the point at which one becomes literate, is the threshold at which migration rapidly increases; other studies have suggested that it is only after completion of primary school or middle school that this threshold is reached. In general, however, even small increments of relatively low-level education appear to increase the disposition to migrate in Africa.

School leavers migrate for reasons not vastly different from those of persons without schooling who migrate; in the case of school leavers, however, many of these reasons become weightier because of the school leaver's relation to the economy and the job market. Some school leavers, of course, do not migrate. Perhaps the predominant reason many of the young migrate, whether schooled or unschooled, is lack of sufficient land or employment at home, which affects both young and old but has particular impact upon the young in society. When the Sukuma boy quoted in the epigraph to this chapter says, "Maybe I can take over the land of my father when he dies, but until then I shall have to stay in town for my living," he is probably not speaking for himself alone but for countless youth who are or will become landless and woefully underemployed if they remain in the rural area. Far greater percentages of educated youth who have chosen to stay in the countryside remain unemployed or underemployed than has been the case with their schoolmates who migrate to the city.

To the growing rural population as a cause for migration must be added the wide discrepancies between urban wages and rural incomes, especially for those with even minimum schooling. Not only are minimum urban wages generally computed to be greater than rural incomes (admittedly a somewhat dubious calculation), but average wages of youngsters with schooling exceed wages of their uneducated migrant agemates by a considerable difference and exceed the income of their schoolmates who remained in the rural area by even greater multiples. Thus, even when a youngster decides to risk a considerable period of urban unemployment before finding a job, his risk is a rational calculation in economic terms.

For many, of course, other factors clearly enter into the decision to migrate. For some, the search for post-primary education, more abundant in urban areas, may compel them to migrate to the city; but their search for additional education may be largely a surrogate for their search for higher income, given that salaries and wage rates remain tied inexorably to academic qualifications, even when these are not immediately relevant to what the job entails. For others, there are additional appeals: the wanderlust of adolescence, the lure of bright lights, the amenities of city living, the presence in the city of family members from whom one might receive assistance, the desire to escape constraints imposed by parents or local customs in the village. But for the young migrants with schooling and for their parents who often make decisions for them, the decision to migrate appears to be principally an economic decision, a judgment that the wisest course of action for them is to seek their fortune in the city. It is only as the number of youngsters with meager education outstrips the number of jobs available or as more youngsters with post-primary education become available to fill positions (positions for which entry qualifications rise as applicants with more education appear on the scene) that the primary school migrant has come to find himself unable to fulfill his ambition and has somewhat reluctantly turned his steps toward home.

But the fact that a youngster with schooling migrates to the city is by no means a sign that he is thereby impoverishing the rural area. There are many and significant returns to the rural area from his migration--returns that augment those derived from diminished pressure on the land through rural-urban migration. First among these are the financial returns to the rural area. Although figures on the extent of urban remittances to rural areas vary greatly, net remittance flows are almost invariably from urban to rural areas. While evidence varies on the uses to which urban-rural remittances are put, the recognition of the need for working capital to acquire, maintain, or develop farm enterprises may in many instances be a prime cause of migration. Often, flows of cash and people between town and country develop into a rural-urban economic system which can be examined in itself and in which the exchanges and allocations of funds are important both to the rural homestead and to the migrant while he searches for work. These rural-urban systems become micro-systems within the larger economic system of the country, and they serve their members well. Obviously those with education, earning higher wages as they do at the urban end of the economic link, account for much of the flow of needed cash from the urban areas back to the farm and rural community. They contribute greatly to the viability of the micro-economic system.

There are other potential returns to the rural area as well. Frequent visits between urban and rural dwellers permit the free exchange of ideas, although it is not always clear to what extent ideas gained in the city are relevant to the rural setting. But even if there is lack of proof that migrants in the city effectively locate and transmit knowledge and technologies back to the rural areas, there seems little evidence from Africa to suggest that their presence in the cities has adversely affected technological innovation or agricultural development in the rural areas. Youth who have gone beyond primary school to gain an apprenticeship in the city often return with skills that are essential in the rural community. In short, evidence suggests that rural-urban migration, and especially migration of educated youngsters, is paying substantial dividends to the rural communities from which they come and to which they often return. While in most of sub-Saharan Africa only a small portion of the rural youth who have attended primary school become long-term migrants from their home area, moreover, it is not by the actions of these youngsters alone that the primary school is to be judged. A more important and potentially more researchable economic question is how well the school has prepared that much larger portion of its students who, in most countries, remain in the countryside in the hope of leading productive lives there.

4. EDUCATION, INNOVATION AND PRODUCTION

> Yes, I will do farming first of all, to get enough money....When I cannot continue my lessons, where shall I go? I have to work and dig. All Basukuma cultivate. There is no other possibility and besides, I like it because if I dig a shamba I get some money and food, so there is profit in it....No, I don't mind the hard work and I do not agree that 'farming would be my last choice, it is just good for uneducated people,' because also the educated are digging and I agree with that....There is no hard life (in the village), you get everything for nothing, I mean food. In town you have to buy goods and you have no shamba to dig....I don't want to go to town because you have a hard life there. You have to pay for a house and if you have to work, your salary cannot furnish all that....All people in town without work are robbers....I know because I was in schooling at Bwira and lived in town for two years. So if I cannot continue my lessons, I don't go to town, I go home.
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> -Interview with a Sukuma boy, quoted by Heijnen (1967)

Although the evidence presented in the preceding chapter indicates that those with schooling migrate to town in greater percentages than those without, it is not just the potential and actual returns migrant school leavers make to rural communities that constitute the contribution of the school to those communities. Many school leavers, in fact, do not migrate to the city; and of those who do migrate, an increasing number who have no more than primary education soon return to the rural area. This is not necessarily to say that they return to become highly productive members of that area, however.

The fact that many migrant school leavers are unemployed in the city has often obscured the fact that many more are unemployed in the countryside. Those visible in the city are but the tip of the iceberg. The size of the less visible part of that iceberg was perhaps first clearly shown in the Christian Council of Kenya (LeBrun, 1967) study, which estimated that of 148,000 Kenyan primary school leavers in the Class of 1965 almost five times as many school leavers (50,000) were unemployed in rural areas as were unemployed in urban centers by the following year. Furthermore, the rural unemployed school leavers in the class outnumbered by more than two to one those who were active on family farms (22,500) and those in rural self-employment off the farm (500). Subsequent studies have likewise shown that the "unemployed primary school leaver problem" is not just a problem of the cities. Both Brownstein (1972) in Kenya and Rhoda (1979) in Ghana found that less than 5 percent of those completing primary schools in rural areas were counted some 18 months later among the unemployed in town, whereas both Boakye

(1973) and Peil (1970) found more than 40 percent of recent Ghanaian school leavers unemployed in rural areas. This percentage is apt to grow with increased provision of schooling, declining chances of finding employment in the cities, and reluctance of relatives to continue support to unemployed school leavers as the time required to find work lengthens. As Chapter I indicates, however, unemployed school leavers in the rural areas are not necessarily unemployed because of irreducible antagonism toward farming acquired from the school. But whether the school has provided them with the motivation and the knowledge to be productive and innovative farmers is another matter.

The question of what motivations, skills, and knowledge relevant to making a productive contribution in the rural area the school does provide, is crucial both for the unemployed rural youth and for those employed on farms or elsewhere in the rural economy. It becomes increasingly important because the educated rural population is now growing more rapidly than the uneducated rural population (e.g., Sabot, 1972), and because the educated increasingly comprise a larger percentage of the rural work force. Is primary education in rural areas, as Bennett (1970) has asked, an investment in ignorance?

There are many in Africa who would say that it is. The charge is long-standing and widespread that those who have been to school are not only alienated from the farm but make unproductive farmers. In Africa, the school was criticized on these grounds long before independence. In a commentary written during the wave of independence, Evans (1962) summarized the climate of opinion that not only prevailed then but still largely prevails:

> For many years, British administrators and others concerned with the developing countries of tropical Africa have criticized Western-type schooling introduced there for what they believe to have been its bad effects on the life of rural peoples. They have complained that such schooling is prejudicial to rural life, since it produces a distaste for agriculture and leads to a drift from the land. They say it promotes in school children a desire to be clerks or white-collar workers and, because of their schooling, they develop a strong dislike for manual work and a reluctance to soil their hands with physical labor. They assert that these values inculcated by Western schooling lead finally to an almost complete rejection of rural life, a contempt for agriculture, and therefore to a decrease in rural productivity.

In the two decades since this climate of opinion was described, much has been said and written about the failure of the primary schools to produce innovative and productive farmers who love the land. By contrast, little research has been carried out to assess the impact of the primary school on agricultural development in

Africa. This chapter examines the research that has been done to assess whether rural dwellers with primary education are more productive and more innovative than those without that education. Obviously, the research must be confined to those who are employed, for they alone are regularly in a position to demonstrate the qualities mentioned.

The Primary School As A Productive Investment: Africa in World Perspective

The charge that the primary school is not an economically productive investment is not limited to Africa. It is heard throughout the developing countries. But this charge must be kept in perspective. Many students of agricultural development have given schools more credit for its achievements than have many educators, politicians, or the popular press in tropical Africa. Although the contention that schools contribute significantly to agricultural development was initially based on limited empirical evidence, and evidence not gathered in Africa, Bradfield (1964), Wharton (1965), and Mosher (1966) all concluded that not only was education important or even indispensible for rapid agricultural development, but that formal education was an important part of that education. In somewhat more guarded or limited conclusions, Schultz argued (1) that whereas development might occur without schooling when only use of a single new factor was called for, schooling did make a difference when agricultural growth depended upon adopting and using a complex of new production factors, and (2) that education was most likely to be effective in a modernizing environment. Although relatively few careful empirical studies have been conducted in Africa on the school's impact on agricultural productivity, evidence has accumulated in various low-income countries during the past decade. The evidence, recently analyzed by Lockheed, Jamison, and Law (1979), lends strong support to the conclusion that schooling does contribute to agricultural productivity. Because their analysis suggests what is likely to be found in this inadequately filled compartment of research on the relationship between schooling and agriculture in Africa, it deserves mention here.

The Lockheed, Jamison, and Law analysis was based on eighteen reported field studies on the relationship between education and farm productivity in low-income countries. All but one were published in the 1970s, but only two concerned research in Africa (both on Kenya and discussed later in this monograph).

Lockheed and his colleagues analyzed 37 sets of farm data, which allowed them, when other variables were controlled, to determine the effect of schooling on farm productivity. In 6 of these data sets they found education to have a negative effect; but in the other 31 sets the effect was positive and generally statistically significant. Overall they calculated that farm productivity increased on average 7.4 percent as a result of a farmer's completing four additional years of primary education rather than none. They further found that four to six years of primary schooling appeared to provide a threshold at which the effect of education became more pronounced. Finally, they concluded that the empirical evidence of the past decade supported Schultz's hypothesis that the impact of primary education was increased in a modernizing environment.[11] It is against this more extensive background of data on low-income countries that the limited African research data concerning effects of education on agricultural productivity should be weighed.

A second body of data that is likewise important in assessing the criticisms leveled specifically at the primary school is data gathered on returns from education. Since independence the priorities in African education have been profoundly influenced by manpower planning which stressed the need to fill high- and middle-level manpower positions. This has resulted inevitably in placing high priority on the expansion of secondary and post-secondary education. Simultaneously, as shortfalls in high- and middle-level manpower were being quantified by planners, consciousness of the unemployed primary school leavers grew. The convergence of these two concerns led many to judge that investment in primary education was a generally "poor investment" even during a period when "investment in education" was considered one of the surest roads to development and modernity. If one is to consider the contribution of primary education to agricultural development, therefore, it is perhaps best to disabuse oneself of the idea that the returns from investment in primary education are low in comparison to those from investment in secondary and higher education. Several studies, the most important of which are cross-national studies with limited data from Africa, have attempted to calculate and rank such returns.

The best-known is that of Psacharopoulos (1973, 1976). In a cross-nation analysis, he reviewed 53 case studies encompassing returns to education in 32 countries, 4 of which (Nigeria, Ghana, Kenya, and Uganda) were independent African states. With respect to the returns to educational investment by level of education, he concluded:

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[11] Their criteria for identifying an environment as modernizing included the presence of new crop varieties, innovative planting methods, erosion control, and the availability of capital inputs such as insecticides, fertilizers, and tractors or machines.

> The first pattern that we detect in our data is that rates of return decline by level of education. Looking first at the social rates of return, the average for primary education is 19.4 percent. This pattern proved to be statistically significant when tested by means of the individual country observations. Private rates show a similar pattern between primary and secondary level (23.7 percent and 16.3 percent, respectively) while the rate of return to the university level is 17.5 percent.[12]

Perhaps the best analysis for policy makers of Psacharopoulos' data is that by Blaug (1973), who pointed out that almost all less-developed countries suffer from an underinvestment in primary education accompanied by an overinvestment in higher education. This is virtually an inevitable consequence of manpower forecasting, which computes "returns" on the basis of meeting so-called "requirements" for persons with secondary and higher education while considering that returns from persons with primary education (who typically work on the farm) are negligible or non-existent. Where rate-of-return analysis is used in lieu of cost-benefit analysis, the benefits of education are taken to be the extra earnings that regularly accrue from people with additional education--after standardizing for differences in family background and, sometimes, native ability determined at an early age. Basing his conclusions largely on Psacharopoulos' worldwide survey of 18 countries, 10 of which are considered less-developed, Blaug writes:

> There appears to be underinvestment in primary education in almost all less-developed countries; that is to say, given the existing quality of education, too much is being spent on the higher levels and too little on the lower levels of the system....In short...I believe there is now evidence to show that both economic and social objectives would be served by redirecting resources in favor of the lower stages of the educational system.

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[12] Estimates of the social rate of return regularly include the rate on public as well as private investment in education. Thus, while private rates of return would include the rate of return on investment in books, school uniforms, fees (and possibly foregone earnings), social rates of return include the rate on investments, which likewise include the publicly funded portion of teachers' salaries. As teachers' salaries may account for 80 to 90 percent of the cost of primary education, the rate of return from this investment is apt to be considerably below the rate of return on private outlays. Private rates of return, therefore, everywhere exceed social rates of return for the simple reason that the total resource costs of education always exceed the costs which students and parents must bear themselves.

But even more relevant for our specific purposes are the private and social rates of return by level, which Psacharopoulos found in the four African countries on which data could be computed for both primary and secondary education (see Table 11).

TABLE 11 -- SOCIAL AND PRIVATE RATES OF RETURN BY EDUCATIONAL LEVEL AND COUNTRY
(Percentage)

Country	Year	Social Rate of Return			Private Rate of Return		
		Primary	Secondary	Higher	Primary	Secondary	Higher
Ghana	1967	18.0	13.0	16.5	24.5	17.0	37.0
Kenya	1968	21.7	19.2	8.8	32.7	30.0	27.4
Uganda	1965	66.0	28.6	12.0	......	......	......
Nigeria	1966	23.0	12.8	17.0	30.0	14.0	34.0

Source: Abridged from Psacharopoulos (1973).

Inasmuch as primary education has additional effects upon income distribution (and hence, equity) and through students disseminating knowledge beyond the classroom walls, as Psacharopoulos later (1977) pointed out, the case for increasing its share of the educational budget is further strengthened.

Disaggregating the returns from primary education, Psacharopoulos (1977) found those from completion of lower levels of primary education were typically greater than those from completion of upper primary education. This result is remarkably parallel to those concerning productivity in many of the studies analyzed by Lockheed, Jamison, and Law (1979). It would be easy to conclude that rate of return is associated with the acquisition of literacy; but it might as easily be a consequence of attitudes, motivations, and new ideas which the student's uneducated counterpart, occupied solely with plow or herd, may never have acquired.

Psacharopoulos' cross-country analysis of the rates of return to education does not stand alone. In analyzing studies of returns in twenty countries, four of which were in Africa, Hadley (1976) similarly found that data from most countries indicated that the returns to primary education were significantly greater than the returns to other levels of education. Hoerr (1974) found in a study in Ethiopia that the highest social rate of return accrued from those who had six to eight years of primary education. Carnoy and Thias (1971), in a study in Kenya that separated the rate of return in rural areas from that in urban centers, found that both the private and social rates of return for completed primary education were greater for landholders in rural areas than either (1) the rate of return for completed primary education in urban centers, or (2) the rate of return for some secondary education in the rural area. Equally important, however, was Carnoy and Thias' ability to demonstrate how rapidly the rate of return to education may decline in urban areas as unemployment becomes an increasingly grave problem. This is probably now occurring in rural areas as well.

The Carnoy and Thias study, in its attempt to disaggregate rates of return in rural areas from rates of return in urban centers, suggests that caution must be exercised in accepting evidence on returns to primary education in general as proof that primary education pays dividends in the rural area. Before accepting such evidence, a number of factors must be considered. First, primary education (as most other education) is unevenly distributed between urban and rural areas in Africa and aggregate returns are almost certainly unduly weighted by returns to primary school leavers in urban areas. Second, as many rural primary school leavers migrate to the cities, the immediate return on their education is a return rendered to the city. Only their remittances to the rural area and, often much later, their return migration to the rural area, offer a potential contribution to rural development. Third, both the difficulty of measuring rural income and the residual distortion of urban wage and salary schedules caused by initial ties to colonial salaries make the usual measures of returns less meaningful in indicating productivity than would be the case in a developed country. Finally, as suggested by Carnoy and Thias (1971), the rapid growth of both primary and secondary education in most African countries, when contrasted with the limited number of wage employment opportunities opening up, suggests that the rate of return to investments in lower levels of education may, when unemployment is included in the calculation, be rapidly declining. As this will affect secondary school leavers as well as primary school leavers, however, it may have little effect on the relative rates of return to investments in these two levels of education.

The Impact of Primary Schooling on Rural Productivity and Rural Innovation in East and Central Africa

Attempts to assess the impact of schooling upon agricultural development inevitably come up against the question of what indices of agricultural development are to be employed. Essentially two types of indices have been used in studies that have related primary schooling to agricultural development. The first of these is the adoption of innovations or, closely related to this, the use of approved techniques and recommended behaviors. The second is productivity or actual farm yield. Writing recently to this point, Colclough (1977) comments:

> With regard to the primary span of schooling, there are those who argue that in most countries this has beneficial effects upon rural welfare. It is widely believed that literate farmers are more able and productive than illiterate farmers. But a survey of the available evidence forces agnosticism even on this point. Studies from various parts of the Third World reveal conflicting, and generally, very weak relationships between schooling and its benefits to agriculture, apart from the propensity to adopt progressive farming methods.

Although the evidence cited earlier from Lockheed, Jamison, and Law (1979) should in large part allay the concern expressed by Colclough about the effect of primary schooling on productivity or efficiency in agriculture worldwide, little evidence has been accumulated in Africa specifically. At the same time, the evidence from Africa is impressive, if not fully consistent, in demonstrating that schooling often enhances the propensity to adopt innovations.

Of the three studies which directly examine the effect of schooling on agricultural productivity in Africa, all were conducted in East and Central Africa. As two of these also treat the impact of schooling on the adoption of innovations, it might be well to start with consideration of that study in which productivity (increased yield) was used exclusively as the criterion of agricultural development.

P. Moock (1973, 1976) studied the output of maize in the Vihiga Special Rural Development Programme in Kenya's Western Province. He sought specifically to explain differences in yields of maize (maize production being the most important enterprise in the area) with particular attention to managerial ability. Basically, Moock addressed himself to the question: "Does the experience of formal schooling make the person a better farmer? a worse farmer? or does academic education not affect farm management ability?" Using the yield of maize as his criterion of productivity, he found that managers with four or more years of schooling generally obtained higher yields than did managers with less schooling. Refining and interpreting this conclusion, he commented:

> Whereas the effect of schooling on farm decision-making could be strengthened, no doubt, by reforms that brought locally adapted agricultural content explicitly into the primary school curriculum, there is a significantly positive effect of education, as currently provided, on the managerial ability of maize farmers in Vihiga. The significant rung on the education ladder appears to be the fourth year. Presumably, the farm manager who has completed four years or more of schooling has acquired the minimum level of computational, linguistic, and conceptual tools that are necessary for the successful resolution of the problems that characterize smallholder farming. Although these skills may be taught with a different end in mind, they are perfectly general and would seem to have useful applications in agriculture.

Although he further found (1976) that completion of one to three years of schooling was associated with higher yields for women managers in his sample, this did not apply for men. This he attributed to the migration of the more able men who left behind a residue of the less able with less education to handle farm management. On the other hand, both men and women with four or more years in the formal school system produced more output per unit of input on average than did farmers who had not been to school.

The second study which employed a direct index of productivity was Vanzetti's (1972, 1974) study of maize production in Zambia. His research, however, investigated both increases in productivity and adoption of innovations. It was predicated on the belief that substantial increases in production come mainly from the adoption and use of improved practices, a belief supported by a number of studies in Africa (cf., Bigelow, 1978). Vanzetti addressed his study specifically to answering two questions: (1) How can education assist in motivating the cultivator to improve his farming, and (2) How can it assist him in acquiring the knowledge and ability required to turn desire into achievement? Although Vanzetti conceived of education as broadly encompassing past and present "cosmopolite" experience, direct training and experience in farming, and schooling, it is his findings with respect to schooling that are important here.

The survey was conducted in two areas of Zambia--Mumbwa and Katete. Since a considerable number (104) of the cultivators in the Mumbwa sample had been to school whereas only 14 cultivators were found to have attended school in Katete, a less privileged area, this survey proved of special value. This difference in the total number of persons with schooling in each area was found to affect the agricultural productivity of the individual who had been schooled. Vanzetti found in Mumbwa that productivity was positively associated with the education of the cultivator. Here, higher productivity of those with schooling arose primarily from the school's impact on motivation; that is, schooling increased a conscious desire to earn money regularly in order to improve one's standard of living. Because schooling was found to contribute little to farming knowledge per se, however, Vanzetti concluded that once motivated, cultivators could and did obtain relevant farming knowledge as needed from other cultivators or, in the case of new crops, from the Extension Service. In Katete, on the other hand, with its very limited number of educated persons, schooling was not found to contribute to increased productivity either directly or through increasing motivation.

The results of the Vanzetti study that related to the adoption of innovations are equally interesting. The adoption behavior of each cultivator was determined simply by counting the number of improved practices he had adopted. From these scores an Improved Farm Practices Index was constructed. Although the Improved Farm Practice Index correlated highly with schooling in Mumbwa, it did not correlate significantly with schooling in Katete. This contrast, especially in conjunction with Vanzetti's findings on productivity, suggests that there may be a "critical mass" or threshold beyond which the presence of educated persons provides mutual reinforcement among those who are schooled and serves to increase their adoption of innovations. As Vanzetti pointed out:

> Other research projects, which have associated schooling with adoption behavior of cultivators, have shown that, in Africa, schooling was generally not significant, whereas in India, where the level of schooling was usually higher in rural areas, it was. It has been shown in this present study that, in Mumbwa, where the level of schooling was high, it was significantly associated with adoption behavior, but this was not the case in Katete, where the level of schooling was lower.

Although most other studies reviewed here present much stronger evidence that schooling in other parts of Africa is significantly associated with adoption behavior, the contrast Vanzetti suggests between outcomes in a population with a considerable number of schooled cultivators and outcomes in one with very few schooled cultivators may suggest an additional important school-related dimension of the "modernizing environment," which both Schultz (1975) and Lockheed, Jamison, and Law (1978) found to be an important characteristic of situations where schooling was most likely to increase the recipient's productivity.

Hopcroft (1974) carried out the third empirical study on productivity, a study which, like that of Vanzetti, also considered adoption of innovations. Using the data of an on-going (1969-1970) Small Farm Enterprise Survey in Kenya, he attempted to determine whether schooling raised the productivity of farmers. To answer this question, which he judged central in evaluating social returns to investment in the educational system, he measured the impact of various levels of farmers' schooling on productivity in maize, tea, and cattle farming. By using three levels of schooling (grades 2 and 3; grades 4, 5, and 6; and completed primary or higher school) as his educational categories, he found, in general, that a higher level of schooling was not associated with an increase in farm productivity. This outcome, he presumed, reflected dissatisfaction with farming that arose from heightened ambition associated with schooling. At the same time, he concluded, this ambition could lead the school leaver to become a highly innovative farmer if he did decide to take up farming as a career. His data, in short, led him to conclude:

> While the gross effect of schooling is marginal at best, and may be negative, the evidence from this study supports a slightly more encouraging view of interrelations between education and farm productivity. This encouraging aspect, furthermore, is bound to become increasingly important as it becomes apparent to school leavers that off-farm jobs are less and less available. The effect of education, in this view, is above all to broaden horizons and raise expectations. It provides some familiarity and ability to deal with modern concepts and institutions.... When an educated farmer decides to settle down to farming, when he develops some commitment and abandons his off-farm pre-occupation, he is likely to be a more aggressively innovative farmer. When it comes to applied knowledge about farming practices and husbandry techniques, there is no evidence that the farmer who has been to school is better off than one who has not. There is, however, evidence that such a farmer is likely to seek out such knowledge more aggressively from agencies and institutions where it is available. There is also evidence that he is likely to use modern farming inputs more intensively and, in general, be more commercially oriented.

Thus, like Vanzetti, Hopcroft found that any impact schooling might have on productivity resulted from the motivation of the schooled youngsters and not from their greater knowledge about farming. Unlike Vanzetti's findings in Mumbwa, however, he found that this motivation was not sufficiently directed toward the task at hand to immediately enhance productivity.

The remaining studies of the impact of schooling upon agricultural development in East and Central Africa have focused specifically upon the adoption of improved agricultural practices rather than upon productivity per se. The most geographically comprehensive of these were conducted in Kenya by Naylor and Ascroft (1966) and, later, by Heyer and Ascroft (1970). Naylor and Ascroft, in surveying factors affecting agricultural development, interviewed heads of households and, in most instances, extended family heads in three areas of Kenya. Attempting to determine differences between the knowledge, attitudes, and activities of those heads of household with some formal schooling and those with *none*, they found, in general, that those who had attended school were more apt than others to possess characteristics associated with the progressive farmer:

- they knew more about land consolidation;
- they understood the need for irrigation and had plans to improve their water supplies;
- they fenced more land;
- they knew about erosion;
- they sold more of their food crop;
- they had more money in the bank and--when they needed more--applied to the Agricultural Loan Bank for loans;
- they employed more farm labor and more farm tools;
- they regarded cash crops, working capital, farm machinery, and graded cattle to be increments to rural wealth;
- and they were more inclined to visit, and more favorably inclined toward Community Development Assistants, Agricultural Officers, farmer training courses, and field days.

On the basis of this evidence, they could only conclude that the comparison of "answers of those with some formal education with those who have no formal education, furnished quite conclusive evidence that education, even just a little education, is a primary factor in rural development."

Generalizing from this study to the impact of schooling in other rural areas must be done with caution, however. In the second Kenyan study referred to above, for example, Heyer and Ascroft (1970) later surveyed 14 districts to determine which factors were conducive to the adoption of improved farm practices. In this instance the data regarding the impact of schooling on improved practices were far more ambiguous; high percentages of "high adopters" were found among the unschooled in some districts. Nonetheless, the study also found that *in most districts surveyed* the "high adopter" significantly had some schooling (1 to 4 years). As the differences in adoption behavior between the schooled and the unschooled cultivators were not large, however, the evidence that limited schooling resulted in a significant difference in adoption behavior was less conclusive than it had appeared to be in the earlier study conducted by Ascroft and Naylor.

A more intensive study of the adoption of innovations in rural development was conducted by Almy (1974) in Meru, Kenya. Although the scope of her study went far beyond the impact of *formal education* upon adoption behavior and innovation, she did give attention specifically to the impact of schools. For our purposes, perhaps, the most important of the hypotheses she tested was that "general education is positively related to adoption of innovations of all types." Her findings confirmed, at a statistically significant level, that there was "a positive relationship between years of formal education and agricultural, luxury, health, and total adoption." Her conclusions, inasmuch as they took cognizance of the curriculum of the school, are especially important in any reconsideration of educational policies or strategies. Furthermore, because they run contrary to much of the rhetoric of educational reform, they deserve particular mention here.

Among the characteristics she found necessary for individuals to comprehend and adopt new mechanisms were their cognitive skills, the most important being:

> The ability to conceive of a strange item or practice in one's own use and grasp some of the advantages and problems of this novelty. Literacy, arithmetic, and general practice in logic refine the ability to hear of, and conceive the use of, such items. Early adopters must have these skills to a greater degree as many innovations have to be adapted to local needs and constraints. Most of the later adopters can learn these adaptations from neighbors.

In contrast to other studies of the relationship between formal education and rural innovation, the Almy study considers the nature of the formal education the innovators had received; it differs further in that it specifically acknowledges that the development of cognitive skills, rather than agricultural knowledge and skills, is crucial for developing innovative behavior. In this she takes sharp issue with the tenor of much current criticism that African education is too closely cast in the colonial (urban-oriented) mold:

> It is asserted that the Kenyan rural primary school system stresses skills and information of more use to a British school boy training to be a white-collar worker than to a farmer's child in a predominantly agricultural economy likely to return to his father's farm. Nevertheless, it was found that formal education in Meru contributed significantly to the individual's adoption of innovations. In a school system in which agricultural training was relegated to a minor extra-curricular activity, and in which almost no information on specific agricultural innovations was provided, any effect on agricultural adaptiveness must have been primarily one of skill rather than information. This result clearly indicates the importance of the growth of cognitive skills for the development of a populace that will adapt readily to change.

Thus, to Vanzetti's assertion that the school has inculcated the motivation to change in order to improve one's life, Almy added a further conclusion: that the primary school had developed in students the general cognitive skills required in order to adapt information or techniques to novel or appropriate situations. How the school achieved this with the curriculum it inherited and how well it achieved this, given the school's potential for developing cognitive skills, remained unanswered. Unanswered, too, was the question of how much attention the school system actually gave to developing those cognitive skills involved in problem-solving, cognitive skills which on the surface appear most directly relevant to productive innovation.

The sixth East African study, one from which more precise data might have been anticipated, was the previously cited interdisciplinary study conducted in the Mwanza District of Tanzania and reported by Heijnen (1967). The interdisciplinary group set out to determine, among other things, the impact of primary education upon the propensity to adopt improved or recommended farming practices. For this purpose, the researchers used as a standard for judging improved practices the recommendations of the Western Research Centre, Ukiriguru, for improving cotton farming. But since extensive access to schooling was so recent a phenomenon in the district, few who had attended school had farms of their own; and it is possible that the better results achieved by those who had attended school were less a result of schooling than of more profitable family farms--farms which had permitted parents to send their children to school in the first place. In order to obtain a sufficiently large sample, therefore, additional school leavers from nearby Bukumbi (which was also surveyed for farm practices) were included in the results. While differences between schooled and unschooled farmers in the expanded group were not extreme, Heijnen did conclude that schooling had some effect in increasing the propensity to adopt improved practices.

Two measures were used to assess this effect. After examining farmer interest in attending extension courses on modern farming, the researchers concluded that interest in modern cotton growing practices was greater among peasants with at least some primary education than among those with none. In examining the actual use of recommended farm practices, researchers found that farmers with at least some primary education were also more likely to employ the practices recommended by extension personnel than were those without schooling. For example, those who had attended primary school were more likely than their unschooled counterparts to use recommended practices such as early planting, appropriate spacing, and proper ridging, and to hire labor or mechanized equipment. In none of the cases studied did farmers who lacked primary education apply recommended practices to a greater extent than their schooled counterparts. Thus, the Heijnen study lent support, as did the previous field research from East and Central Africa, to the proposition that even if the school itself does not teach the vocational skills of farming, it creates a receptivity, motivation, and approach to problems that lead to improved agriculture. This appears to be the significant contribution which the primary school in the district studied made to the rural area. If so, it is a far more appropriate outcome of schooling than that of merely encouraging youth to remain in areas where the potential for new profitable farms, self-employment, or wage employment are often severely limited.

The final study from East Africa, however, does not support the conclusion that school creates adoptive behavior, as indicated in the studies cited thus far. In one of the more intensive studies of farm innovation, Moris (1971) measured the extent to which peasant farmers adopted "Western" farm innovations in Embu District, Kenya, and attempted to identify the factors that led to adoptive behavior. Our particular interest here, of course, is again the extent to which formal education of farmers increases the acceptance of innovations. Using only an adult group as the "educated farmer" group to be considered in assessing the impact of schooling on agriculture, Moris made a point seldom made in other studies:

> Obviously, for anyone interested in the impact of colonial education upon today's adult farmers, the critical group to study will be those individuals who obtained more than four years of primary schooling but who eventually returned to become full-time farmers.

Classifying farmers according to a Farming Modernity Index that he and Bowden had previously developed and used in Uganda, Moris then compared only adult full-time "modern farmers." He found that, on the whole, farmers with more education were not notably more modern in their farming practices than those with less or none.

This is not to say, however, that education--in the form of schooling for their children--was not highly valued by farmers in the area. In both a "random" and a "non-progressive" sample of farmers surveyed, for example, he found:

> 13 and 14 percent, respectively, of each sample were paying in excess of 400 shillings per annum on school fees (this is roughly the cost of keeping a child for one year in Government secondary schools)...there were four farmers each paying above 1,000 shillings per annum....For these farmers, at any rate, the cost of education is draining off virtually all the farm profits which might otherwise go into farm investment: on several occasions in the field survey, I heard of instances where farmers were selling grade cattle or attempting to sell land in order to keep their children in school.

In considering alternative investments of funds that might have been made, then, the returns from children actually sent to fee-paying secondary schools had to be of considerable size for such education to be considered as contributing to, rather than detracting from, rural well-being. As such expenses were not incurred in sending children to primary school, however, this potentially detrimental side-effect of schooling cannot be laid at the door of the primary school, except insofar as it stimulates the desire for additional education.

The Impact of Primary Schooling on Rural Productivity and Rural Innovation in West Africa

Less field study literature exists on the relationship between school and adoption of agricultural innovations in West Africa. Compared to literature from East Africa, it is also not as consistent in indicating that schools affect positively the farmer's acceptance or adaptation of innovations.

The first study was conducted in 1966 by Rogers and associates (1970) in 71 villages in what was then Eastern Nigeria. It was designed to measure not only the degree to which villagers adopted innovations promoted by agricultural change agents--in this case, the agents of the Extension Service of the Eastern Nigeria Ministry of Agriculture, but also to distinguish between "early adopters" and "late adopters" of innovations and to isolate the factors that led to their divergent behavior. The researchers concluded that the relation of schooling to adoption of innovations was positive. Reasons for this went beyond the fact that literacy was positively associated with schooling, however. The researchers noted specifically that while "the correlation between literacy and education is quite high...the two variables are far from perfectly related. Both education and literacy, however, are related to innovativeness in about the same way..."

As Vanzetti had concluded in Zambia, the research team found that not only the education of the individual innovator but the educational level of the surrounding village accounted for innovativeness:

> We wish to explain (the peasant's) innovativeness, which we believe to be affected, both by his individual level of education (an "individual variable") and by the mean level of education in the village....For instance, an individual with relatively high education, but who resides in a village with relatively low education levels, is likely to be less innovative than an individual with less education who lives in a village that has relatively high education.

The possible importance of the mean level of education in a village in encouraging adoption of innovations is a factor that should not be ignored when developing or testing educational strategies designed to promote rural development.

In a micro-study in Nigeria that similarly focused on the propensity of the educated to accept innovations, Basu (1969) examined innovations in four villages in Western Nigeria. By using the degree to which recommended farm practices were adopted or adapted in the area as a measure, Basu assessed the proclivity to adopt or adapt new practices among (a) schooled and (b) unschooled farmers. In field interviews with a random sample of 108 farmers, he found that most information about farming was not obtained in the primary school (where, most likely, it was omitted from the curriculum or was presumed to result from forced work on the school farm) but from the extension agent. Commenting on the results obtained, he concluded:

> It might seem strange that more than one-half of the 74 percent of the subjects who had no formal education had adopted most of the recommended farm practices. Generally, exposure to formal education has been valued as a means of increasing knowledge about new farming ideas, but the data suggest that the supposedly favorable attitude for the adoption of recommended farm practices was gained by the respondent farmers outside the formal school system.

Thus, his field data place in abeyance the question of whether or not the primary school system, irrespective of curricular content or method, creates motivations and cognitive skills which later result in receptivity to innovation. Because the level of education in the villages researched is unknown, it is difficult to determine if the village educational level that Vanzetti and Rogers suggest as a possible threshold at which the school is likely to stimulate individual innovative behavior existed here.

Basu's conclusion that school does little to encourage agricultural innovation is also supported by Ross Bigelow's (1978) more recent work in Ghana, where he tested farmer receptivity to innovation in four different rural milieux. In each area, some of the constraints on productive farming were removed: a Soviet-assisted State Farm and the local farmers surrounding it; an Israeli-advised Workers Brigade Area; the area surrounding a University Farm and Research Station; and a locally initiated Farmers Cooperative and farmers around it. In each instance, 50 farmers were sampled and an Innovation Index based upon the number of innovations adopted per farmer was used to test the hypothesis that formal education is not related to innovation. As revealed in the composite table below, the hypothesis was supported in all four of the agricultural environments he surveyed.

TABLE 12 -- IMPACT OF MODERN AGRICULTURAL INSTITUTIONS AND SETTLEMENTS ON NEIGHBORING EDUCATED FARMERS

Formal Education Begun	Percentages	N	Number of Innovations	Innovation Index
None	61	118	164	1.39
Primary	9	17	12	0.71
Middle	23	45	53	1.18
Advanced: Non-agricultural	3	5	5	1.00
Subtotal	96	185	234	1.26
Advanced: Agriculture[a]	4	7	18	2.57
TOTAL	100	192	252	1.31

[a] Innovation Index = number of innovations divided by number of farmers.

Source: Bigelow (1978).

Thus, Bigelow's study, like those of Basu in Nigeria and Moris in Kenya, tends to disconfirm the general proposition that persons with schooling adopt agricultural innovations more readily than persons without schooling. Since a sizable number of his participants in each location had primary or more advanced education, moreover, his results likewise call into question the importance of some minimum local educational level as a prerequisite for producing innovative potential in primary school students.

School Leavers and Productivity in the Rural Informal Sector

If promoting rural development or increasing productivity in the rural sector of the economy is to be successful, it is not apt to be achieved by focusing exclusively on farming per se. It is through other rural occupations that some school leavers will make their contribution. In this regard, Weeks (1972) found that only a relatively small percentage of the youth in rural Buganda decided to work outside of the rural area and that, of those who remained in the countryside, only a relative few (13 percent) were employed in the formal sector of the economy; the vast majority worked in the informal sector, engaged in such activities as construction work, driving, or even unskilled labor. Moreover, the informal sector in the essentially rural area he surveyed absorbed predominantly educated youth: only 8 percent of those in his population had never attended school. (This appears to reflect both the rapid expansion of schooling and the nature of many of the occupations in the informal sector.) When the earnings of those in this sector were assessed, Weeks found only three significant factors in distinguishing between relatively high earners and relatively low earners: age (those over 21); occupational pluralism (those who were engaged in several jobs in the informal sector); and education (those who had five or more years of schooling). Those who fell in each of these categories earned more than those who did not. Thus, some initial evidence exists that in occupations other than farming itself, education contributes to greater productivity in the rural community.

Perhaps equally important from the standpoint of our concerns here is the fact that these workers were inclined to remain in the rural area. The youth Weeks studied in depth had a fairly positive attitude toward their villages and their future life there--one further indication that the school does not turn youth irrevocably away from rural occupations. Of the youth studied, 42 percent had never looked for an outside job, although varied employment opportunities were available close by. (The same willingness to take up employment in the rural informal sector was not true for youth who had gone on to secondary school, however. All of them had searched for salaried employment.) Even among the rather large percentage of primary school leavers in rural areas who had looked elsewhere for salaried work, dissatisfaction with the work they were doing in the rural sector was minimal.

The charge that the schools denude the countryside of its potential producers was found to be unwarranted. Of the 139 educated youth interviewed, only 22 expected to be living in urban areas. A significant portion of these youth did, however, intend to have a dual residence; that is, they expected to maintain both a rural and an urban home. This practice obviously establishes a bond or link between urban and rural communities; it reflects an approach to life that permits rural youth not only to establish multiple sources of income but to retain at the same time their essentially rural village orientation. It is a practice which also promises to facilitate the spread of innovation and new ideas from the more modern cosmopolitan center to the rural village.

The educational characteristics of the work force in the informal sector of the rural economy have been inadequately studied to date, and it would be easy to overgeneralize from the evidence that Weeks reported. One need not venture far to find evidence that, contrary to Weeks' findings in Uganda, many youngsters with schooling are disposed not to take up jobs in the rural non-farm sector even when such jobs are ostensibly available. Such evidence exists in Kenya. There the Village Polytechnics were developed specifically to offer modest village training programs to carefully limited numbers of students in trades or occupations in which existed a lack of local trained personnel. The attention accorded this innovative program has been great but the results have fallen far short of expectations. Mackie (1971), for example, reported that of 24 leavers from one pioneer Village Polytechnic, only 3 had followed the anticipated route to self-employment in the trade they learned, while 11 had returned to formal education, either by re-entering primary school or by directly entering secondary school. In a subsequent study, Anderson (1973) reported that 30 percent of the Polytechnic leavers he traced had migrated to urban areas, and almost 37 percent of those who were then employed had done so. In a more recent survey of the post-training activities of 1971 Polytechnic leavers, Court (1974) found that 41 percent of those he located were using the skill in which they had been trained but nearly 30 percent of these were doing so in an urban area. Because the Polytechnic program was designed specifically to provide training for rural employment, and specifically for employment in fields where a definite need existed in the rural area, it is doubtful that primary school-cum-Village Polytechnic training is significantly affecting rural development or enhancing the quality of rural life. The destinations of these school leavers appear to be influenced not by the school program established but by forces outside the control of the school. This will be discussed briefly in the concluding section of this monograph.

Education, Innovation, and Productivity: The State of Our Knowledge and Implications for the Schools

It is in respect to the third question, whether or not school products make poor farmers and villagers, that field study evidence is despairingly incomplete and in some respects quite contradictory. This relative lack of evidence is all the more unfortunate as the vast number of young people leaving the rural primary school will comprise an ever greater percentage of the predominantly rural adult population upon which the welfare of most African countries must rely. The belief that school products make poor farmers and poor villagers is commonplace in Africa, despite evidence that returns to primary education generally exceed returns to higher levels of education in low-income countries. This belief is partly a legacy from the period when primary school leavers were prepared for and found jobs in lesser positions in government or in the urban economy. No longer able to find such jobs, school leavers now often return home and there, too, find no land or jobs awaiting them. In short, the population growth which underlies expansion of schooling results in unemployment which economic strategies have not yet dealt with effectively. Evidence as to how willing or able primary school leavers are to create or take up jobs in non-farm occupations in the rural sector remains at this point ambiguous.

Most of the empirical studies encountered in the literature, in contrast to the hortatory and pejorative literature that inundates educational journals, suggest that those who have completed primary school or advanced to its upper grades before becoming farmers usually prove to be more innovative and productive farmers than those with no schooling. Where this is the case, the reason appears to lie partly in the motivation instilled in students to attain a more rewarding life, partly in the cognitive skills the schools develop, partly in the desire to acquire relevant vocational knowledge which school leavers demonstrate, and partly in former students' awareness that sources of new knowledge are available to them. It would further appear that where attendance at school has become a common pattern, the mutual reinforcement which comes from being with other school leavers with similar motivations encourages a willingness to innovate and to take a chance in the hope of realizing a better future. Having been given the motivations, attitudes, and cognitive skills the school provides or enhances, educated farmers in modernizing environments have generally been found to be more productive than their uneducated neighbors.

But to ascribe the willingness to innovate or the capacity to increase production largely to the primary school is but to indicate the measure of our ignorance. Since research studies on agricultural development usually provide little or no information about the quality or the content of primary education in the districts where agricultural studies are being conducted, any conclusions must be carefully guarded. At the very least, there is conclusive evidence on two points: (1) primary education is not a sine qua non for innovative behavior or increased productivity on the part of farmers because some unschooled as well as schooled farmers prove very modern in these regards; and (2) there is little evidence to support the belief that the school so disorients school leavers as to render them unfit in the long run to farm productivity. What the school leaver seeks, as we have indicated earlier, is the good life; and where he finds that farming or rural occupations can provide him with an improved standard of living, the evidence from Africa indicates he will use the motivations, skills, and knowledge he acquired in school to secure the additional knowledge and skills required to reach that standard. Insofar as the primary school provides him with the knowledge, skills, and inquisitiveness to seek out new knowledge as he needs it, it is playing an important role in his quest for a better life.

Whether the primary school will play this part poorly or well depends in no small measure upon the policies which guide education and the skills of those who impart it. It would certainly be inappropriate for those policies to debilitate or diminish an institution for faults not intrinsic to its nature or potentialities; it would be more appropriate to recognize that long-term trends, population growth, and ill-conceived or half-heartedly executed policies for rural development are imposing rigid limits upon the effectiveness of the school. What promises to be most productive within these limits constitutes the final part of the concluding chapter.

5. CONCLUSION

> The fact is that school leavers' views of their vocation in life are determined largely by what happens outside the school, in the society and economy. As long as they see in farming a poor and stunted life, they will seek for what seems to them the better opportunities of the cities. What is wanted, first of all, is a really effective general policy towards agriculture which would demonstrate that improved farming can bring as much money and as rewarding a life as other occupations.
>
> -Archibald Callaway, 1963

This monograph has addressed the question of whether or not the primary school, the educational institution which touches by far the greatest proportion of the total school population in Africa, has been shown by field studies to be the enemy of the farm. More specifically, it has focused on three common variants of this question: does the school create in youngsters attitudes that turn them irrevocably away from the farm and rural life; does the school impair the farm by promoting a rural exodus that denudes the countryside of its human resources; and does the school fail to contribute to greater productivity and appropriate innovation on the farm? Unfortunately, despite the abundant literature on the actual or potential role of the school in rural development, field studies which address these questions are still scarce. Results from those that do exist show occasional disparities, which suggests that answers to the above questions must sometimes be qualified by reference to time and situation.

First, does the school as presently constituted build in students a barrier of attitudes that virtually precludes a school leaver willingly accepting a rural life? The answer is most frequently negative. Although school children or school leavers most often select as their first choice a well-paying urban job, the preponderance of evidence suggests that they are not unwilling to turn to the land when it is available--frequently, but far from always, after trying their hand first at finding a well-paying urban job. It appears that where the possibility of modern farming and the availability of the inputs required to make it successful are within their vision, they willingly accept such farming as a way of life. Where they see only traditional farming, however, constrained by limits of land, capital, and customs, they look to urban employment as their best hope. In short, the primary school itself neither creates an overwhelming desire to choose farming under any circumstances, nor does it raise a major barrier to youngsters' choosing to farm or work elsewhere in the rural area. The rural life is a way of life familiar to

Africans, and school children are not as eager to turn their backs upon it as the literature often suggests. As Caldwell (1969) pointed out, "for all the temptations of town life, most Ghanaians still choose to remain in the village."

Second, does the school promote a rural exodus that denudes the countryside of the productive young? Our answer is even more conclusive. Field studies of migration conclude unanimously that formal education is, except for those who have spent less than four years in primary school, positively correlated with rural-urban migration. But here, in an unusual sense, correlation does not prove causation. In this instance, the school is an instrument and not a cause. The cause lies in a complex matrix of social and economic forces, such as limited opportunities to find full and rewarding employment in the country, and disproportionately high financial rewards in the city--financial rewards often further inflated since employment opportunities and salaries are often tied to irrelevant school qualifications.

But migrating to the city is not the same as impoverishing the rural area. Migration serves the rural area in many ways. First, far from denuding rural areas, migration has instead served to moderate their population growth--growth which has already created alarming unemployment and underemployment in the countryside. With few exceptions, indeed, the available unrestricted land does not go untilled because school youngsters have gone off to seek their fortunes in the city. If it goes untilled, it is for quite different reasons. Second, migration provides the rural area with cash to maintain a decent standard of living and with working capital to make farms productive. Almost without exception, field studies show that the net flow of money is from the rural migrant to his family, homestead, and community. Through cash remittances, gifts, products carried home, and institutions such as ethnic improvement unions, migrants serve their communities well; without the infusion of their resources, their home communities would indeed be impoverished. Third, and perhaps most important, the flow of migrants between town and country creates a receptivity to new ways of doing things and a nexus along which new ideas flow. It is thus that customs impeding rural development are eroded and innovations not previously conceived enter and gain sustenance in the village. School leavers, as the most literate of migrants, are in the fortunate position to perform this service.

It is in respect to our third question, whether the school has failed to contribute to greater productivity and appropriate innovation on the farm, that our evidence is less substantial and on the surface sometimes inconsistent. Even here, the preponderance of evidence indicates that those with some primary education are more inclined to accept innovations and are more productive than their uneducated neighbors. When the environment in which they are working is a modernizing environment, or when they enjoy the attitudinal and intellectual reinforcement that comes from an increasing number of other educated persons around them, their productivity and their disposition to innovate appear to increase. At the same time, those with schooling serve the rural community in other ways. They can increase efficiency and productivity of the community by willingly taking up jobs in the informal sector of the village economy, a sector often calling upon the basic skills of literacy and numeracy acquired in primary school.

But to say that the African rural primary school, with its limited intellectual and physical resources, has served the rural community far better than it is given credit for is not to endorse complacency. It is rather to remind ourselves that there is an institution already well-established that has responded, often belatedly but not therefore unsuccessfully, to the problems of the society surrounding it. It might be well to suggest, therefore, some general directions in which to move in order to make even more beneficial the primary school's impact on society and on the lives of its students. The empirical results of the studies surveyed do not in themselves indicate these directions: they can only allay growing fears of education, encourage flagging hopes for education, and strengthen the conviction that a comprehensive strategy for rural development that does not include a strategy for educational development will fail to achieve its goals.

It is well beyond the scope of this monograph to advocate any comprehensive educational strategy for rural Africa. In recent years, dedicated and experienced people have been hard at work, singly and in conference, formulating such strategies. Descriptions and defenses of strategies have appeared not only in journals but in a growing body of compilations, conference reports, and substantial treatises, some of the most important of which are cited in the brief postscript to this monograph. I should, however, like to suggest what appear to be major elements in such a strategy as they relate to primary education, both in light of the evidence presented in the preceding chapters and in light of what I believe to be sound and verified educational principles.[13] Equally important, I should like to indicate *illustratively* how broad principles might be translated into specific content of an educational program. The proposals are in many respects familiar proposals. Insofar as this is the case, they will no doubt be disappointing to many. On the one hand, they rest on my conclusion from evidence presented in preceding chapters that while the school is not rendering the disservice to the rural area it is so often presumed to be rendering, it is not rendering the full service it is capable of providing. The proposals rest, on the other hand, upon my belief, documented from the history of education, that what schools do passably today they can do even better tomorrow. Doing better means, in some respect, doing differently.

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[13] Two excellent analyses of various alternatives which differ sharply in their conclusions from some or all of my proposals have recently appeared and deserve attention: Mark Blaug's Education and the Employment Problem in Developing Countries, and Christopher Colclough's "Formal Education Systems and Poverty-Focused Planning." Each is cited in the bibliography.

I should like to propose, in the first instance, that *a greater, not a lesser, percentage of the resources devoted to education should be devoted to primary education*. Even when externalities such as promoting national unity, increasing equity in the distribution of national wealth, improving health, or wider dissemination of knowledge by educated youngsters are ignored, the social rates of return to primary education are not only among the highest to any level of education, but also higher than returns to most alternative forms of investment (Blaugh, 1975). Although these rates reflect urban wages in large part, the role of the school in facilitating migration helps the rural areas share in benefits, both by reducing rates of rural population growth and by furnishing many rural families with the capital or supplementary income necessary to sustain homesteads, improve farming, or begin non-farm rural enterprises.

The *way* in which increased resources should be expended on primary education is, of course, as important as their availability. It is frequently and with some merit argued that significant changes in the school program cannot be introduced because of the limited education of primary school teachers. This is a valid objection when precipitous changes are introduced in school programs; but it is not sufficient reason to conclude that significant changes in school programs must await a new generation of school teachers to replace those now in classrooms. It is important to prepare new teachers for the school programs they will be handling when they first enter teaching, but it is equally important to prepare them to change with--and to change--these programs. Perhaps even more important is that funds be allocated to the in-service training of teachers--an area in which both innovative methods and quantitative expansion of institute functions have revolutionalized the educational scene. While changing school programs by preparing teachers differently may be easiest in systems that are expanding slowly, change may be possible even in countries like Nigeria where rapid primary school expansion is the rule of the day.

I should like to propose, in the second place, that any educational program is likely to prove less valuable than it could be unless it takes upon itself the character of the environment in which it is situated. In the rural areas, this will mean that much of the instructional content from which principles are developed, literacy, numeracy, and problem-solving skills are improved, and social behavior is learned, will be derived from the rural environment. This sounds like a familiar prescription, one harking back at least as far as the Phelps Stokes Reports (Lewis, 1962) and the Report of the Colonial Office (Colonial Office, 1954). It is. The fact that these programs have proved difficult to implement in Africa does not disprove the principle that people can best be educated to become effective and productive members of any community in which they will ultimately live, by first educating them to become such members in their present community. But to say that a school program should take on the character of the environment in which it is situated is not to say that its program should be limited to local problems and rural concerns. Much of the adventure that is good schooling anywhere is the adventure of exploring the unknown, of seeing more distant horizons. To emphasize what is within the immediate and past range of experience need not exclude a realm for the imagination.

Evans (1962) cogently stated this position:

> The essence, then, of our educational problem is to find a rural idiom for Western schooling in rural tropical Africa, which will enable it to realize its fundamental values through increased productivity and better living....It cannot be emphasized too much that a rural idiom in education...can be realistic and successful when it derives from general method and approach; and more particularly from a strictly practical approach to the environment of the school child and the problems of community living. In such circumstances, the rural idiom cannot become a separate entity--it must color, inform, and permeate the whole school curriculum and all the school's activities....Western schooling, properly oriented, can certainly lay sound foundations for increased productivity. It can produce pupils who, other things being equal, are more likely to regard agriculture and rural life sympathetically than otherwise. It can supply them with knowledge and to some extent understandings of the questions involved in raising a rural standard of living. It can acquaint them with problems which face a farming community in an underdeveloped area. It can animate them with a desire to tackle their problems, and in some measure provide them with the skills and knowledge to try to solve them.

It is frequently argued that this is an impractical solution to the problems of education. Contentions that such past attempts have generally failed are of limited importance if they do not suggest why they did not succeed. One obstacle to their success, of course, has been the lack of teachers adequately prepared to devise or carry out such programs. As suggested earlier, Africa may now be in a better position to deal with this obstacle, especially if changes are gradually introduced. A second obstacle frequently mentioned is the fact that parents look to schools to prepare their children to escape the land, not to use it well. This objection will erode slowly if the rewards from rural work begin to equal the rewards from urban work; it will also erode if students are helped to develop a disposition to find solutions to long-standing farm problems and to learn how and where to find the knowledge to solve them. A third obstacle, that "standards" will inevitably fall if nationally-controlled programs (with their watchdog approach of the "common examination") give way to the greater localization of programs, remains to be demonstrated. The experience of Tanzania should be valuable in determining how effective educational changes that incorporate local initiatives can be when embodied in wider programs of rural transformation.

I should like to propose, in the third instance, that since vocation is an important ingredient of a good life, to ignore concerns with occupation in the only formal educational program in which most African children participate, deprives primary education of a rich dimension. Arguments against incorporating vocational dimensions in the primary school are various and widespread. Evans (1962), while strongly advocating introducing a rural idiom throughout the school program, saw the introduction of agriculture as too often divorced from general teaching methods, noting:

> In such cases, it has tended to develop a content and a method all its own, usually far too heavily laden with elements of vocational agriculture, so that in fact the gap between it and the problems it seeks to solve has more often been widened rather than narrowed.

This is a possible consequence, not a necessary corollary. Others would argue that the structure and sociology of the school preclude its effectively performing many of the developmental functions often expected of it (Brembeck, 1974), but it appears more reasonable to rely on the school's demonstrated potential to make different contributions in different times and different environments. Arguments against incorporating an occupational dimension into African school programs, except insofar as they reflect parental expectations of the school, may be highly culture-bound: they fail to take adequate account of the vast differences in local cultural patterns. As Fafunwa (1973) effectively pointed out, work at an early age is part of the life of African children:

> If they are boys and between the ages of eight and ten, they are helping their parents with sowing, harvesting, cattle rearing, fishing, weaving, and the like. And by the time they are twelve or fourteen years old, they probably have their own plot to farm or a net for fishing....In addition to this side of the child's education, there are social and cultural demands from the community that encourage early maturity--an aspect that has long been forgotten in Europe and America.

Thus, the most effective argument against the study of agriculture would be the concerns of parents, and these might be expected to decline if income policies were altered to reward improved agricultural practice and diminish the differential between urban and rural incomes.

The returns from an activity-oriented program in a vocation are not exclusively vocational. Much of the primary program is passive, involving the absorption of words that have no concrete referents; teaching relies far too much upon words and far too little upon things and activities. Assuredly, good pedagogy for children involves alternating periods of activity or movement with periods devoted to the quieter pursuits of study and reflection. When the latter can be supplemented through agricultural and natural science-related activities, all education is enhanced. But a single-minded concentration on manual skills would reflect a misdirected emphasis within an agricultural component of rural education. Pointing out that "manual skill contributes only marginally to the success of modern small farming," Jon Moris (1967) has argued that the school has a broader obligation to modern agriculture:

> The intention is to transform the natural environment by first transforming the student's concept of it. Instruction will generate a "multiplier effect" through giving the student power to recreate resources to match his concepts, and through tapping his energies for personal advancement.

In achieving these broad goals, Moris believes the primary school can: build an inventory of technical concepts that can later be drawn upon in extension work; create a familiarity with sources of technical information; explain scientifically what is happening in government development projects in the local community; train students in the simple use of cost/benefit analysis applied to agricultural enterprise; teach techniques of recordkeeping and computation as required in modern farm management and production; provide first-hand experience in the management of money and labor; and stimulate the intellectual appreciation of the natural environment in relation to alternative land-use decisions.

The three propositions advanced--that primary education deserves more, not less, support in the allocation of resources; that sound education in rural Africa is that in which the rural idiom permeates the whole school program; and that vocation is such an important part of the good life that to omit it from the life of the school is to impoverish the curriculum--are intended not to demean what the school is now doing, but to suggest the directions in which to move if its work is to be more meaningful and its contribution even greater. These propositions do not in themselves constitute a strategy for education in rural areas, but rather, with the illustrations that Moris provides, suggest both how more meaningful education can be provided and how a broad philosophy of education can lead to new specific content.

But no matter how imaginative a plan for rural education may be, it cannot by itself achieve its goals if there is no comprehensive strategy for rural development. Such a rural development strategy must be accorded more than verbal allegiance; it must be allocated the resources necessary to carry it out, be dedicated to ensuring that rural incomes approach those in urban areas, and be implemented not to realize social class interests but rather to improve the quality of life of the entire rural populace. Only such a comprehensive strategy and the policies and programs undertaken to implement it will provide the conditions under which young people will be able to visualize and then achieve the good life on the land or in the village. It is here that the relationship between school and society is fundamental, for although education does effect major changes in society in the long run, schools are in the short run largely dependent variables of the society that surrounds them. A sterile and unrewarding rural environment is unlikely to encourage or sustain a noteworthy educational program. As has already been pointed out, we defeat ourselves if we expect too little of the schools; so also we must not expect of schools that which they cannot alone provide. The school is not, in short, the panacea for rural development--or any other kind of development--in Africa.

But to say that the school is not the panacea that will cure the economic and social ills of African societies is not to say that it is the ogre that has brought these ills down upon society. Rather, as research has progressed, we are in a somewhat sounder position to reassess the school's actual and potential role. While the results of the field research reported do not in themselves define an optimal role for the rural school, they do provide an empirical rather than a speculative assessment of what the school has accomplished to date. Equally important, they have for the most part brushed aside the imaginary evils that have been imputed to the school's influence. There is, in short, little in the attitudes and values of most primary school leavers that would prevent them from becoming modern farmers if they could see this as a realizable goal; rural-urban migration of school leavers is not robbing rural areas of irreplaceable resources since most school leavers remain in these areas and those who do migrate provide capital and the stimulus of new ideas to the rural community; and, finally, both the disposition to innovate and productivity rise gradually as the educational level of the individual and of the community rises. This is not a situation which calls for reducing access to the primary school in rural areas, reallocating its funds to enterprises that will lead to ever more polarized rural and urban development, or ignoring the high rate of return that comes to society from an ever more widely educated populace. It is quite a different situation and calls for quite a different prescription. Indeed, if rural communities are to share equitably in the fruits of African development, it should be recognized that the primary school, for all its shortcomings, has already proved a surprisingly good friend of the farm. Were the rural primary school to make effective use of its social and natural environment, it might well prove the best friend the farm has ever had.

POSTSCRIPT

Within the years in which the field studies surveyed in this monograph appeared, numerous conference reports, major compilations of case studies and analyses, and publications of UNESCO relevant to rural education in Africa have appeared. Among the most important of these are the following:

Conference Reports:

Sheffield's Education, Employment and Rural Development: Report of the Kericho Conference (1966); Turner and Hunter's Educational Development in Predominantly Rural Countries: Proceedings of a Seminar Held at UBLS (1968); Manone's The Role of Teacher Education in Promoting Rural Transformation: Proceedings of the Ten Universities of Eastern Africa Conference on Teacher Education (1968); FAO, UNESCO, and ILO's World Conference on Agricultural Education and Training Report (1970); UN's Report of the Interregional Seminar on Problems of Early School Leavers (1973); Commonwealth Secretariat's Education in Rural Areas (1970), Youth and Development in Africa (1970), and Youth for Development: An African Perspective (1975); and Williams' The School Leaver in Developing Countries: A Report of a Workshop (1976).

Compilations of Case Studies and Analyses:

Foster and Sheffield's Education and Rural Development (1973); and Ahmed and Coombs' Education for Rural Development (1975).

UNESCO Monographs:

Education and Rural Development Series:

Education in a Rural Environment (1974); and Agriculture and the Development Process (1975).

Educational Planning Series (with IIEP):

Planning Education in Relation to Rural Development (1974); and The Problems of Rural Education (1968).

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